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ABSTRACT

This monograph parallels others in the "Monographs" series, allowing easy comparisons among the higher education systems of Europe. The volume describes the development of the higher education system in the Republic of Moldava and analyzes its legislative framework and administrative structures. It outlines steps on the academic career ladder and study paths of students. The chapters are: (1) "Higher Education-History and Present Challenges"; (2) "Governance of Higher Education at the National Level"; (3) "Institutional Patterns and Quantitative Developments"; (4) "Governance and Administration at Institutional Level"; (5) "Faculty Structure and Academic Work"; (6) "Students and Graduates"; and (7) "The Future of Higher Education in Moldova." Appendixes list higher education institutions subordinated to the Republic's Ministry of Education and present tables of educational expenditures. (Contains 11 figures, 45 tables, and 46 references.) (SLD)

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HIGHER EDUCATION IN THE REPUBLIC OF MOLDOVA

by

Ștefan Tiron, Coordinator

Valentin Arion, Mihai Paiu,
Vitalie Scalnîi, and Victor Stan

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by

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Preface

Like the other monographs in the UNESCO-CEPES "Monographs on Higher Education" series, this monograph follows a set format that allows easy comparison among the higher education systems of the region that have, so far, been the subjects of monographs. In recent years, the series has added monographs on Hungary (1997), Germany (1999), and Bulgaria (2002).

The present volume describes the development of the higher education system in the Republic of Moldova and analyzes its legislative framework and administrative structures. It outlines the steps in the academic career ladder and, also, the enrollment patterns and study paths of students.

Until the dissolution of the Soviet Union, Moldova was one of the Soviet Socialist Republics; thus, its education system was fully integrated into the Soviet system of education and science. Transition, that began when Moldova became an independent state in 1991, has led to the development of a private sector of higher education The Moldavian authorities are endeavouring to integrate it more fully into the fabric of the national education system, taking account of the new socio-economic conditions in which higher education and its institutions now function. In the process, even the *public* higher education systems are taking on certain characteristics of the *private* institutions: increasing reliance, for instance, on the admission of tuition fee-paying students so as to overcome state funding shortfalls. Also, efforts are underway to link the research function of higher education to a national system of organization of research in general and to the developing market economy of the country.

While maintaining privileged links with the republics of the former Soviet Union, the system of higher education in the Republic of Moldova is making an effort to assure its future development in the context of the Bologna Process and to adapt its practices to European norms. Worth mentioning in this context is the introduction of the European Credit Transfer System (ECTS) and creation of a national system of evaluation and accreditation for higher education.

It should be borne in mind that higher education in the Republic of Moldova is relatively young, the bulk of its development occurring after 1944. The course of this development is thoroughly portrayed in forty-five tables and twenty-one figures that enable easy comparisons between the higher education system as it evolved from that of its Soviet past to that of an independent state. The work as a whole provides an interesting *aperçu* of higher education in this part of Europe.

The writing of this monograph was a collective task involving five authors: Dr. Ştefan Tiron, formerly a Counsellor to the Minister of Science and Education of Moldova, who coordinated the project, Professor Valentin Arion of the Technical University of Moldova, Dr. Mihai Paiu of the Ministry of Education of Moldova, Dr. Vitale Scalnii of the Technical University of Moldova, and Dr. Victor Stan of the State University of Moldova. UNESCO-CEPES is grateful to them for the work that they have accomplished.

Jan Sadlak
Director of UNESCO-CEPES

Foreword

The idea of preparing this monograph on higher education in the Republic of Moldova was relaunched during the official visit to Moldova, from 4 to 6 November 2001, of a UNESCO delegation headed by Dr. Jan Sadlak, Director of UNESCO-CEPES, Bucharest. The first volume of its kind to be published, since 1990, on higher education in Moldova, it describes the many facets of the evolution of the higher education system in the Republic of Moldova, from 1918, to the present day.

The elaboration and writing of the text was made difficult by the scarcity of publications on the organization and operation of the higher education system during the post-1990 period, other than material and data published by the Department of Statistics and Sociology of the Republic of Moldova. The authors also made use of information provided by the Ministry of Education and the Ministry of Economics and took account of the laws and norms promulgated by the Parliament and the Government.

The authors have fully understood that this monograph does not and cannot cover all aspects of the system of higher education in Moldova. They also take responsibility for certain analyses, opinions, and conclusions of their own that may vary from official positions. They, therefore, welcome any suggestions and proposals that their readers may make.

The authors hereby acknowledge the assistance proffered by their colleagues in the Ministry of Education, especially Minister Ilie Vancea, as well as the assistance provided by Mr. Nicolae Micşanski with data collection and the generous offer of technical support extended by Dr. Lidia Macovei in the final stage of our work. It is necessary for us, last, but not least, to acknowledge that this monograph could not have been produced without the support of UNESCO-CEPES. We express our profound gratitude for this support.

Ştefan Tiron

Chişinău, November 2002

Chapter 1

Higher Education – History and Present Challenges

1.1. GENERAL SURVEY OF THE EDUCATION SYSTEM IN THE REPUBLIC OF MOLDOVA

The Republic of Moldova proclaimed its independence on 27 August 1991. Up until then, it had been part of the former Soviet Union and was known as the Moldavian Soviet Socialist Republic (MSSR).

The latter entity was created on 2 August 1940, the result of the unification of a part of the former Autonomous Moldavian Soviet Socialist Republic (AMSSR) (a component of the Ukrainian Soviet Socialist Republic since 12 October 1924) and most of Bessarabia[1] (ceded by Romania to the Soviet Union on 28 June 1940). In addition to rural towns, the Moldavian Soviet Socialist Republic also included six towns belonging to the former AMSSR situated on the left bank of the Dniester River: Tiraspol, Grigoriopol, Dubăsari, Rîbnița, Camenica, and Slobozia, as well as the larger cities in Bessarabia: Chişinău, Bălți, Tighina (ex-Bender), Cahul, Orhei, Soroca, Comrat, and Rezina.

The Republic of Moldova is situated in the Black Sea basin. It borders Romania to the West and Ukraine to the North, East, and Southeast. The area of the country is 33,800 km^2.

On 1 January 1998, the census numbered 4,304,700 inhabitants, composed of Moldavians (64.5 percent), Ukrainians (13.8 percent), Russians (13.0 percent), Gagauzans (an Orthodox Christian minority of Turkish origin) (3.5 percent), Bulgarians (2.0 percent), and other ethnic groups (3.2 percent). In 1998, the average population concentration was 127.4 inhabitants per km^2.

The predominant religious affiliation of the population of Moldova is that of Orthodox Christianity (98.5 percent).

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[1] The history of the land between the Pruth and the Dniester Rivers is complicated. Suffice it to say that the territory that Romania acquired, mostly from Russia, at the end of the First World War, also included, in the extreme North, the area known as Northern Bukovina, with its major city, Czernowitz, that had been under Austrian rule. The population of Bessarabia and Northern Bukovina was predominantly Romanian-speaking. When the Soviet Union annexed Bessarabia and Northern Bukovina in June 1940, it effectuated some important territorial modifications. In addition to attaching Transnistria to Bessarabia, the Soviet authorities detached Northern Bukovina and a piece of Northern Bessarabia, including the town of Hotin, on the Dniester River, and annexed all of this area to Ukraine. At the same time, the Soviet authorities detached the extreme southern part of Bessarabia adjacent to the Danube Delta and the Black Sea coast, including the cities of Ismail and Cetatea Albă (ex-Akkerman), transferring it also to Ukraine. Both areas remain parts of Ukraine to this day.

At the beginning of 1998, the rural population represented 53.8 percent of the total population.

The capital of Moldova is Chişinău, having a population of 700,000. Other large cities are Tiraspol (200,000), Bălți (150,000), and Tighina (140,000).

The Republic of Moldova is an agrarian country, some 72.5 percent of its total land area being arable. The national economy is largely based on agriculture, which is currently undergoing privatization. The climate is dry, and the average yearly temperature varies between +8° and +10° Celsius.

According to the Constitution, the official state language is Moldavian (which is identical to Romanian). Romanian is spoken by 62.7 percent of the population; Russian, by 21.8 percent; and Ukrainian, by 9.8 percent. The teaching languages in education institutions are Romanian, Russian, and, in some cases, Ukrainian and Gagauzan.

The national currency, the Moldavian *leu* (abbreviated MDL), was introduced on 29 November 1993 to replace the Moldavian ruble (which, in its turn, had been introduced as coupons in June 1992) at the rate of 1 Leu = 1,000 rubles (except in Transnistria). In November 2002, the exchange rate was set at 100 lei = around 7 Euros.

In December 1991, Moldova became a member of the Community of Independent States (CIS), and the Parliament ratified this adherence on 16 October 1993. In 1992, Moldova became a member of the United Nations, and in 1995, it also became a member of the European Council.

In 1994, the Parliament adopted the Constitution of the Republic of Moldova, according to which Moldova is a presidential republic. Following the Amendment of 2000 to the Constitution, Moldova became a parliamentary republic. The Constitution of Moldova guarantees the right, without restriction or discrimination, to education to all of its citizens. Education has been designated as secular and free of tuition fees in all public education institutions.

The President of the Republic is the Chief of State. He is elected by the Parliament for a term of four years. The 101 representatives who make up the unicameral Parliament are also elected for four years. The Parliament is the supreme representative and legislative body of the country. The Prime Minister is appointed by the President of the Republic and is confirmed by the Parliament. The Minister of Education is confirmed by the Parliament on the recommendation of the Prime Minister.

The Proclamation of Independence of the Republic of Moldova in 1991 was an incentive for the initiation of radical political, economic, and social changes, including changes in education, aimed at developing a market economy based on private and public property, entrepreneurship, and competition. Until 1990, the system of education in the Moldavian Soviet Socialist Republic had been an integral part of the Soviet education system, based on communist ideology.

The transition from a centralized economy to a market economy also determined the changes that took place in educational policy and the restructuring of the education system according to new concepts. The major objective of these changes is the development of a modern national education policy, free of communist ideology, and based on the principles of democracy and the values of national and world cultures.

After 1991, the system of education began to undergo democratic reforms. A resulting new educational policy was based on new basic principles of education, as laid down in the *Concept on the Development of Education in the Republic of Moldova*, adopted by the Parliament in 1994 and in the 1995 Law on Education that called for humanization, democratization, and the de-ideologization of education. The major task of the reform of education has been the elaboration of a national school system based on a harmonious synthesis of the values of the national and world cultures, the integration of the national system of education into the European area of education, and its synchronization with the changes and new trends in the development of education in Europe.

The strategy for the reform of education, especially the strategy for the implementation of the Law on Education, are reflected in the State Programme for the Development of Education for the 1999-2005 period, that was adopted by the Government in 1999.

1.1.1. The Structure of the Education System

The Law on Education has established the following structure for the education system as per Figure 1 appearing below:

I. Preschool Education
II. Primary Education
III. Secondary Education
  General Secondary Education:
    a. Lower Secondary (*Gymnasium*) Education
    b. Upper Secondary (High School) Education
  Intermediate General Cultural Education
  Vocational Secondary Education
IV. Higher Education
    a. Short-term Higher Education (Colleges)
    b. Full-term Higher Education (Universities)
V. Postgraduate Education

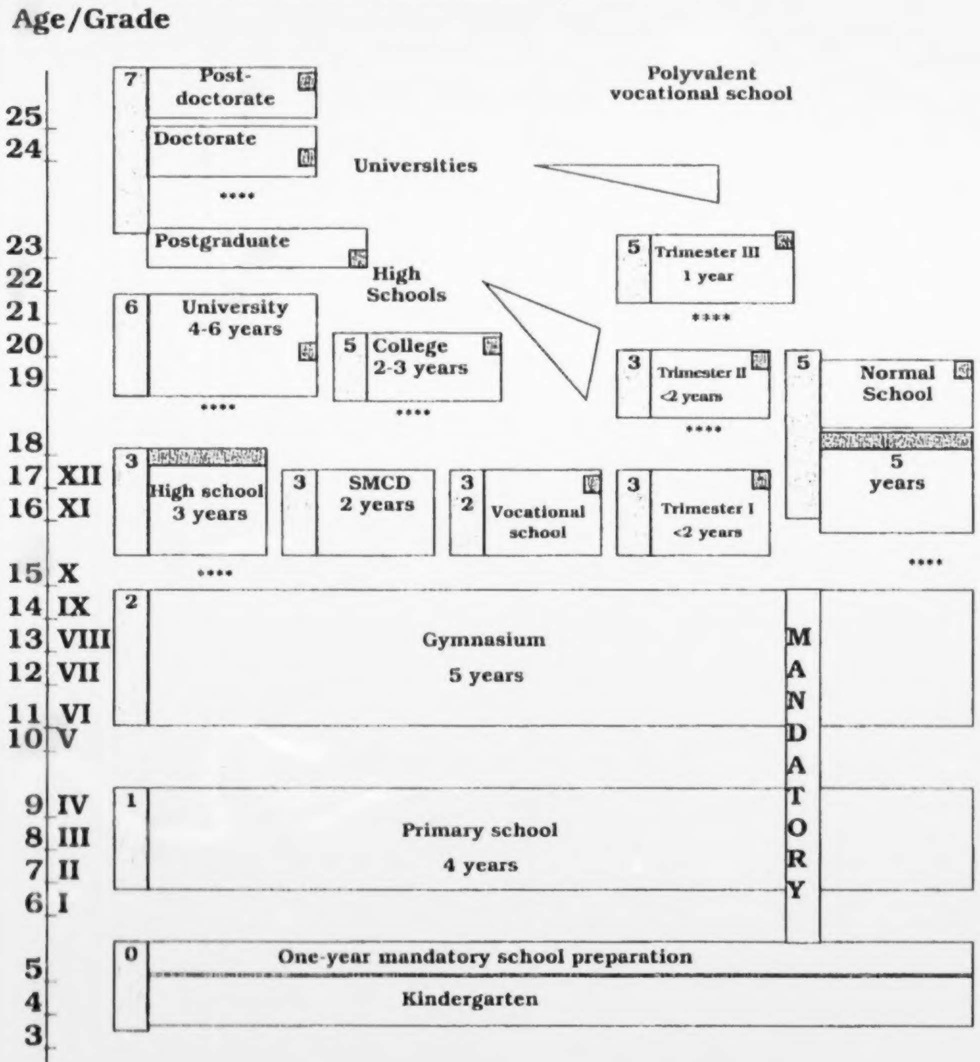
The education system also includes other forms of education:

- Special education (for children with special needs);
- Complementary education (extra-curricular education);
- Adult education.

1.1.2. Description of the Levels of Education

- *Preschool and Kindergarten*: In the new school structure, enrollment in pre-school and kindergarten, between the ages of 3 and 5, is optional. Starting with age 5 to 6, children must be enrolled in a mandatory preparatory class for a period of one year.
- *Basic education:* includes grades I to IX, structured in two cycles: primary (grades I-IV) and gymnasium (grades V-IX) and is compulsory.
- *Primary schools:* in which children are enrolled (grades I-IV) at the age of 6 or 7.
- *Gymnasia:* After graduation from primary school, pupils can enroll in a gymnasium (grades V-IX), the lower stage of general secondary education. Gymnasium-leavers are issued a *Gymnasium Study Certificate* if they take and pass the graduation examination. They are offered the possibility of pursuing one of three educational paths with a view to continuing their studies: enrollment in a high school (grades X-XII), enrollment in a general intermediate school (grades X-XI), and enrollment in a technical-vocational school (2-5 years).
- *Upper Secondary Schools:* Traditional upper secondary schools (grades X-XII) represent the highest level of general secondary education and offer two groups of study fields: the exact and the natural sciences and the socio-humanistic fields. Admission to secondary education takes place on a competitive basis. After having passed the baccalaureate examination, secondary school graduates are awarded a *Baccalaureate Diploma*, which entitles them to continue their studies in colleges and universities.
- *Intermediate general culture schools* (grades X-XI): This type of secondary school offers instruction according to modernized and de-ideologized programmes dating back to 1990. This type of school will continue to operate until 2005, at which point the authorities will reach a decision as to its continued existence. Admission to an intermediate general culture school is based on the availability of openings. At graduation, each student receives an *attestation* that entitles him or her to continue his or her studies in higher education institutions and/or colleges. Upon admission to higher education, graduates of an intermediate general culture school have the same rights and responsibilities as do the graduates of upper level secondary schools. However, the duration of university studies for them is one year longer than for other students.
- *The grading scale* consists of 10 points, from 1, the lowest grade, to 10, the highest, with 5, as the minimum passing grade. A pass/fail grading system may also be employed.

Figure 1. The education system of the Republic of Moldova as per age and grade levels of students and levels of the education system



Legend:

1 - ISCED levels; ▨ - Baccalaureate ◸ - Getting-out on the labour market

**** - Competitive admission

SMCG - Intermediate general culture school (grades X-XI).
ISCE - International Standard Classification of Education.

- Postgraduate studies require one to two years of study. Doctoral studies have a duration of three to four years.
- Post-doctoral studies require up to two years of study.
- Vocational schools lead only to employment.
- The following study levels (grades IV, IX, and XI/XII) end with an examination.
- Special education for handicapped children begins when the child is three years old and ends when the child is eighteen.

1.2. BRIEF HISTORY OF HIGHER EDUCATION IN MOLDOVA

The history of higher education in the Republic of Moldova is relatively young. It may be periodized as follows: *(i)* the inter-war period (1918-1940); *(ii)* the Soviet period (1940-1941, 1944-1950, and 1951-1990); and *(iii)* the transition period (1991-2002).

1.2.1. The Inter-War Period (1918-1940)

During the inter-war period, Bessarabia (the space between the Pruth and the Dniester rivers, inhabited by about 3 million people) was an integral part of Romania. Today's territory, on the left bank of the Dniester (Transnistria), was part of the former Autonomous Soviet Socialist Republic of Moldavia (AMSSR), with a population of 600,000 inhabitants. Its capital was the Ukrainian city of Balta.

The first higher education institution on the territory of Bessarabia, located in Chişinău, was devoted to the study of music. Named Unirea Conservatory, it opened its doors in 1919. Later on, the Unirea Conservatory became the Gavriil Musicescu State Conservatory. It was here that two faculties of the University of Iaşi also opened: the Faculty of Theology, in 1926, and the Faculty of Agronomy, in 1933.

During this period, both in Bessarabia and in the AMSSR, public education registered a revival, and the number of schools increased. By mid-1940, in Bessarabia, there were twenty-five high schools and fourteen gymnasia. In the AMSSR, there were 504 general schools. At the time, the AMSSR experienced an acute need for teaching staff. Primary school teachers, most of whom were only graduates of primary school, were trained in one-year teaching courses. The need for teaching staff was partially solved by the relocation, to Moldova, of teachers and researchers from the Russian Federation and the Ukraine.

These circumstances made possible the setting up, in 1926, of the Moldavian Pedagogical Technicum,[2] at Tiraspol. Based on it, in 1930, the Moldavian Institute for Public Education was opened as the first higher education institution in the region. It had two faculties: the Faculty of Physics and Mathematics and the Faculty of Agro-Biology.

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[2] A technicum is an intermediate speciality institution.

In 1933, with a view to improving the training of teachers, the Institute for Public Education was reorganized into the Pedagogical Institute at Tiraspol, with four faculties: History, Language and Literature, Physics and Mathematics, and Natural Sciences, with a four-year study duration. The Institute would also offer extra-mural and evening courses. During the 1939-1940 academic year, the Institute had 389 enrolled students, and its teaching staff consisted of fifty professors, of whom only five held scientific titles. Notwithstanding, by 1934, the Institute had organized doctoral studies. The Pedagogical Institute of Tiraspol trained teachers of language and literature, history, mathematics, physics, and natural sciences for primary and lower secondary schools. By 1940, the Institute had trained 785 teachers of language and literature, history, mathematics, physics, and natural sciences.

In 1932, the Institute of Horticulture was founded at Tiraspol with the intention of satisfying the demand for agronomists and other specialists in agriculture. In parallel with teaching, the Institute also developed research activities in the agricultural sciences. By the beginning of the Second World War, the Institute had prepared 307 agricultural specialists.

Since the training capacity of the higher education institutions in Transnistria was insufficient – for instance, the 1940 cohort would number only about 100 graduates – most of the staff employed in the various branches of the economy and in the cultural domain were trained in higher education institutions in Moscow, Leningrad, Kiev, Kharkov, and Odessa. Thus, in 1925, 200 students prepared specializations in industry, transportation, and communications in these cities. In 1934, 112 students moved to Ukraine to enroll in higher pedagogical studies; 22 more of them enrolled in medical studies, and 34, in technical studies.

1.2.2. The Soviet Period

THE 1940-1941 YEARS

After 28 June 1940, Bessarabia became part of the former Soviet Union. Along with a part of the former AMSSR (Transnistria), it made up the Moldavian Socialist Soviet Republic (MSSR), with its capital at Chişinău.

As a result of the events of the time, most of the specialists in various fields, culture and education included, were forced to leave Bessarabia. Specialists from Transnistria and other cities in the Soviet Union replaced them. Thus, in 1940, following the decision of the central Ukrainian party authorities, about five thousand engineers, technicians, economists, agronomists, and party workers were relocated to Bessarabia and Northern Bukovina. During the same period, the Soviet government dispatched 865 specialists in agriculture and 1500 primary school teachers to the Moldavian Soviet Socialist Republic.

However, as the number of specialists who arrived in Bessarabia was not sufficient to end the shortage of teaching staff members, persons lacking adequate instruction were employed to fill vacant posts. About one-third of the primary school teachers had no pedagogical training, and 50 percent of them had had no education in general culture either. The shortage of teaching staff was acutely felt in the schools of former Bessarabia. For this reason, the training of qualified staff in culture and education was organized *ad hoc*.

In short order, six pedagogical schools and a primary school institute were set up in Bessarabia. On 16 August 1940, the Moldavian State Pedagogical Institute opened, with five faculties: History and Philology, Physics, Mathematics, Biology, and Geography. Some 740 students were enrolled in the first year of studies. As of the 1950-1951 academic year, the Institute had seven faculties, 2,368 students, and 99 teaching staff members. In 1955, the Institute became the Ion Creangă State Pedagogical Institute. In 1992, it was restructured as the Ion Creangă State Pedagogical University, which, currently, comprises six faculties and a student enrollment of 5,000, most of whom are studying in pedagogical fields. In its sixty-one years of activity, the University has trained over 30,000 teachers.

The training of highly qualified specialists for the national economy, particularly for agriculture, expanded with the organization, in 1940, of eight agricultural technicums and the setting up of the Agricultural Institute in Chişinău, based on the Faculty of Agronomy at the University of Iaşi, which had been functioning in Bessarabia since 1933. During the 1940-1941 academic year, 550 students were enrolled in the three faculties of the Institute. Today, the former Agricultural Institute in Chişinău has developed into the Agricultural University of Moldova, which boasts seven faculties and has 5,200 enrolled students. As of 2002, this University had trained 41,000 specialists.

In October 1940, the State Conservatory was created, based on the Unirea Conservatory that had been set up in 1919, at Chişinău. During the 200[illegible]2002 academic year, the Conservatory enrolled 150 students in sections dealing with the piano, string instruments, voice, marching bands, and the theory of music.

At the beginning of the 1940-1941 academic year, the Moldavian Soviet Socialist Republic had six higher education institutions, twenty-two technicums, and other institutions for intermediate specialities, with a total student enrollment of 6,664.

The Soviet authorities made major modifications in both the contents of the courses, study programmes, and teaching methods, and in the higher education admission system. The latter was expected to grant priority to candidates of worker and peasant background. New subjects of study were introduced into secondary and tertiary education, such as the Basics of Marxism-Leninism, Political Economy, the History of the Soviet Union, the

History of the Communist Party, the Geography of the Soviet Union, etc. Since most of the potential students of worker and peasant background lacked the required secondary level studies for them to be admitted to higher education, so-called workers' faculties (*rabfacs*) were organized in the Moldavian Soviet Socialist Republic to prepare young candidates for admission to higher education.

During this period, the teaching staffs of the higher education institutions on the right bank of the Dniester River were composed of those staff members who had not left Bessarabia and of those who had been transferred there from other Soviet Union republics and from Tiraspol. Thus, several professors from the conservatories in Kiev and Odessa were appointed to the conservatory in Chişinău. The training of young teaching staff members for the higher education institutions in the Republic was organized primarily at universities and institutes in Odessa, Kiev, and Moscow.

The 1940-1941 period ended with the liquidation of the older system of education in former Bessarabia and the institutionalization of the Soviet-type system of education.

THE 1944-1950 PERIOD

During the Second World War, the higher education institutions of Soviet Moldavia were evacuated to the eastern areas of the Russian Federation and to the Central Asian Republics of Kazakhstan, Uzbekistan, and Turkmenistan. During this period, the Pedagogical Institute of Moldavia and the Moldavian Institute for Research in History, Economics, Language, and Literature conducted their activities in the town of Buguruslan, while the Agricultural Institute continued its activities in Sverdlovsk.

During the war, many specialists in diverse fields – agronomists, doctors, engineers, and other teaching staff members lost their lives. Of 10,760 primary school teachers having taught in the schools in Soviet Moldavia before the war, only 1,195 survived. Given these conditions, in 1944, the Russian Federation, the Ukraine, and other republics transferred 5,000 agronomists, teachers, engineers and technicians, economists, medical doctors, and party workers to Soviet Moldavia. Short-term courses were organized in the Republic for primary school teachers. In 1944, 5,000 persons were trained in such courses.

The professional training output of the teaching staff during the period is eloquently expressed in a series of figures. In 1945, of the 7,320 primary school teachers, 4.7 percent held higher education qualifications and 25.8 percent held earned secondary education certificates. The remaining primary school teachers were graduates of seven-year primary schooling. Some 36 percent of them had not completed the seventh grade. In addition, schools were in dire need of primary school teachers. There were around 2,860 vacancies. Staff shortages, especially of Moldavian personnel, was felt in other fields too.

It was not long before other institutes had resumed activity: the Pedagogical Institute of Soviet Moldavia, the Institute for Primary School Teachers in Tiraspol, the Agricultural Institute in Chişinău, the State Conservatory, the pedagogical schools in Tiraspol, Bălţi, Orhei, and Tighina, the agricultural technicums in Soroca, Grinăuţi, Cocorozeni, Saharna, and Brînzeni, the music and arts schools, and other education institutions.

To satisfy the demand for teaching staff in primary and secondary schools, a new Primary School Teachers Institute was established in 1945, at Bălţi, and two pedagogical schools, at Cahul and Soroca. In 1953, the Primary School Teachers Institute in Bălţi was reorganized as the Pedagogical Institute of Bălţi, renamed, since 1959, the Alecu Russo State Pedagogical Institute. On 21 May 1992, the Institute was reorganized as the Alecu Russo State University at Bălţi. By 2002, this University had trained 37,000 teachers, educators, and specialists in various fields of the national economy.

The problem of the training of medical doctors was resolved in 1945 by the relocation, to Chişinău, in 1945, on the decision of the Government in Moscow, of Institute No. 2 of the Leningrad School of Medicine, (that had been evacuated during the war to Kislovodsk, in the Russian Federation), along with its academic staff, amounting to 43 professors, and its 570 students. The School of Medicine in Chişinău was restructured, on 25 July 1991, as the Nicolae Testemiţanu State University of Medicine. As of 1996, a school of pharmacy was added and the name, changed accordingly. It is the only state higher education institution in Moldova that trains medical and pharmaceutical staff. By 2002, this university had trained over 30,000 medical doctors and pharmacists.

At the beginning of the 1945-1946 academic year, there were six higher education and twenty-six technical institutions in Soviet Moldavia in addition to a number of secondary education institutions. During that academic year, the pedagogical higher education institutions admitted 450 candidates.

Given that the number of secondary school graduates was lower than 450, a decision was taken to organize preparatory sections in all the higher education institutions. Candidates for admission were to attend preparatory courses for a period of one to three years. At the end of their preparation courses, graduates would receive a maturity certificate and would be enrolled in their designated faculties, without having to take an admission examination. Of the 120 students having completed the one-year preparatory course at the Pedagogical Institute in Chişinău, 109 candidates were enrolled in the Institute. These preparatory sections continued to operate until 1948.

In the first post-war years, former soldiers of the Red Army, who had graduated from ten-grade general schools with high marks, were also enrolled at the Institute without having to take the admission examination.

Extra-mural education gained breadth during this period. Almost all higher education institutions, pedagogical schools, and other institutes included an extra-mural education section. During the 1945-1946 school year, over 900 students enrolled in extra-mural education in the pedagogical institutes.

Between 1946 and 1950, the issue of eradicating illiteracy and of providing compulsory education for all school-age children was raised. To solve this problem, an increased number of qualified teaching staff, especially in primary and secondary schools, was needed. Special attention was directed at the training of specialists in mid-level specialized education institutions (tehnicums) to which both seven-class and general school-leavers were admitted. For the first category, the study duration was between three and four years; for the second category, studies lasted for one or two years.

The budgeted funding allocated to training in the 1946-1950 period amounted to 23,454,400 rubles, including 5,857,800 rubles for higher education institutions.

The State University of Chişinău was founded in March 1946. It was intended to prepare highly qualified specialists and researchers for the national economy and for culture, as well as to conduct research activities in physics, mathematics, geology, pedagogy, biology, chemistry, history, philology, and in other fields. During its first year of existence, the University enrolled 320 students who were trained by thirty-five teaching staff members. At present (and under a new name), the State University of Moldova comprises eleven faculties and offers eighty specialities.

New faculties were opened in the pedagogical institutes that, at the time, were primarily engaged in the preparation of elementary and lower secondary school teachers. The numbers of students enrolled in all education institutions increased.

The Republic had no institutions for the training of economists and lawyers. In 1946, the Moscow Economics Institute opened an extra-mural studies department in Chişinău. So did the Moscow Institute for Legal Studies.

In 1946, the Moldavian Affiliate for Scientific Research of the Academy of Sciences of the USSR was set up in Chişinău. In 1949, the Affiliate became the Moldavian Branch of the Soviet Academy of Sciences that, on 2 August 1961, became the Academy of Sciences of Moldova.

During these years, all higher education institutions organized doctoral studies.

During the 1950-1951 academic year, 14,193 full-time students were enrolled in the institutes and technicums of the Republic. This figure included the 5,321 students enrolled in higher education institutions. The number of extra-mural students represented 34 percent of the total student enrollment. Most of the students pursued study courses in pedagogy, agriculture, and medicine, thus responding to the needs of the economy. During the first five years after the Second World War, student numbers increased by a factor of 2.7. In 1950, in Soviet Moldavia, the ratio of students to the general population was 36:10,000, as compared to the ratio in 1940 that had been 10:10,000.

In 1950, in Soviet Moldavia, the eight higher education institutions and the thirty-six technicums were, for the most part, training future educational, agricultural, and medical staff members. The engineering staff for Moldavian industry was being trained in other cities of the Soviet Union. Starting in 1949, Moldavia was able to send a certain number of young people to study in higher education institutions in Moscow and Leningrad. At the same time, many graduates of higher education institutions in Moscow, Leningrad, Kiev, Czernowitz, and other cities – constructors, architects, economists, primary school teachers, engineers, and technicians, would be dispatched to work in Soviet Moldavia. Between 1946 and 1950, about three thousand primary school teachers came to teach in Moldova.

THE 1951-1990 PERIOD

One of the major tasks of the period was the training of engineers, technicians, and other specialists for industry, construction, transportation, communication, etc. With this end in view, new faculties were opened at the Agricultural Institute in Chişinău, the State University of Chişinău, the State Institute of Medicine in Chişinău, the State Pedagogical Institute in Chişinău, and the State Conservatory. The primary school institutes in Bălţi and Tiraspol were granted the status of pedagogical institutes.

Doctoral studies began to be offered at higher education institutions and in the Moldavian branch of the Academy of Sciences of the USSR, in the research institutes of Soviet Moldavia, and in other cities in the Soviet Union. In 1958, the numbers of scientific researchers in research institutes, universities, and other organizations numbered 1,625 (of which only 446 were of Moldavian nationality), as compared to 745 (of which 126 were Moldavians) in 1950. Scientific research took place mainly in higher education institutions, in which about 70 percent of the scientific research staff were involved.

Budgetary allocations for higher education increased considerably, which allowed for the consolidation of the technical and material infrastructures of the higher education institutes, the building of laboratories, and the purchasing of equipment and of teaching and research material. The period was characterized by the intensification of evening and extra-mural higher education.

By 1958, the Republic owned and operated eight higher education institutions and thirty-one tehnicums, the number of the latter having diminished as compared to the situation in 1950, owing to the fusion of institutions with identical specialities. During the 1958-1959 academic year, the number of day students increased 1.9 times as against the 1950-1951 academic year. Many Moscow universities were offering extra-mural courses in Chişinău. Students enrolled in extra-mural higher education represented 42 percent of the total student number. The State University of Chişinău also offered evening studies.

As the number of graduates of secondary schools exceeded the number of study places anticipated in the state plans for admission to higher education institutions, competition increased. In 1951, there were 625 candidates for admission to the State University of Chişinău for the available 300 places.

Many secondary school graduates from Soviet Moldavia were sent to study in Moscow, Leningrad, Kiev, Kharkov, Odessa, Lvov, etc., generally in technical higher education institutions. In 1955, twenty Moldavian candidates were admitted to the B. Şciukin Theater School in Moscow. After graduation in 1960, they founded the Luceafărul Theater in Chişinău.

During the 1958-1959 academic year, fifty-six students per 10,000 inhabitants were enrolled in higher education institutions, as compared to only ten students enrolled in 1940-1941. As in earlier years, most of the students were pursuing agricultural, pedagogical, and medical studies.

In 1956, the admissions regulations of speciality, intermediate, and higher education institutions were modified. According to the new regulations, candidates with at least two years of work experience as well as Red Army war veterans would have priority in registering for the admission examinations. Those who had fought in the Second World War were admitted to the first year of studies without having to take the admission examination. During the 1958-1959 academic year, 50 percent of the students admitted to the first year of day course programmes were selected from among candidates having had at least two years of employment experience.

Increased student numbers produced increased numbers of higher education graduates. Between 1951 and 1958, 17,637 specialists were trained, of whom more than half were graduates of the primary school teacher and pedagogical institutes.

During the period in question, an increased demand for specialists trained in the higher education institutions of Soviet Moldavia became apparent. Among them, however, the ratio of specialists of Moldavian nationality was low. For example, on 1 December 1957, only 25.6 percent of the specialists in the national economy were of Moldavian nationality.

At the same time, the exchanges of higher education graduates between Soviet Moldavia and the other republics of the Soviet Union would continue. In 1954, 240 engineers and specialists in agriculture, graduates of institutes all over the USSR, were assigned to jobs in Moldavia. In 1953, the Agricultural Institute of Chişinău dispatched twenty-five of its graduates to work in Byelorussia, Kazakhstan, and other republics and regions of the USSR.

At the beginning of 1959, there were ten specialists per 1,000 inhabitants in Soviet Moldavia, as compared to the average of eighteen across the Soviet Union as a whole.

In the late 1950s, new student residence halls were made available to the Moldavian higher education institutions. The State University student complex was completed, providing four residence halls for 1,300 students. In 1958, 65 percent of the total number of Moldavian students were lodged in residence halls, and 80 percent of them were recipients of state study allowances.

The year, 1964, marked a significant moment in the history of technical higher education in Soviet Moldavia with the emergence of the Polytechnic Institute in Chişinău. Developed from the faculties of engineering and economics of the State University, the Institute would initially train engineers in electrotechnics, civil engineering, and the food industry. Later on, its instructional range would extend to radio-electronics, automatic systems, machine building, architecture, light industry, etc. In 1993, the Institute became the Technical University of Moldova. Over its thirty-seven years of activity, the Technical University has trained over 50,000 engineers.

In 1964, the Gavriil Musicescu State Conservatory was reorganized as the State Institute of Arts, and later on, in 1991, as the Gavriil Musicescu Music Academy. At the end of 1998, the Gavriil Musicescu Music Academy and the State Institute of Fine Arts merged to form the State University of Fine Arts of Moldova. As of 12 July 2002, the University has become the Academy of Music, Theater, and Fine Arts. The institution covers both graduate and postgraduate artistic education.

In 1988, every fourth specialist in the national economy was a higher education graduate or had attended intermediate speciality studies (at a tehnicum). More than half of the total number of specialists was involved in branches of production. At the same time, 10,600 university graduates were employed in positions that did not require such a high level of qualification. Many of them were occupying workers' positions. When asked why they chose such jobs, 28 percent cited the higher salary of a worker than that of a specialist holding a higher education diploma.

During the period, the quality of the teaching staff in the entire Republic improved considerably. During the 1986-1987 school year, of 43,000 schoolteachers (the total number), 77.6 percent were university graduates and 16.7 percent were intermediate pedagogical specialists.

1.2.3. The Transition Period

The period between 1991 and 2000 was the period of transition from a Soviet-type system of education to a national and democratic system of education. A new concept of national education had been designed and endorsed by 1994. A new law on education (1995) and other laws and regulations came into force. These represented the legal basis of the reform of education and permitted the elaboration of new educational principles. One of the declared reform objectives was the harmonization of the system of education in the Republic of Moldova with the European systems of education.

Radical changes were made in the contents, organization, structure, and governance of education, in general, and of higher education, in particular. New models of education institutions including upper secondary schools, gymnasia, colleges, and vocational schools were organized. A new series of state universities came into being. Also, several private higher education institutions emerged as alternatives to the state institutions.

In the course of only one year, 1991, three state higher education institutions were opened. The first of these was the National Institute for Physical Education and Sports, organized on the basis of the same faculty of the Ion Creangă State University in Chişinău. At present, the Institute has four faculties and a teaching staff of 120.

On 1 August 1991, the State University in Comrat was opened with a view to responding to the need for specialists for the schools and the economy in the southern part of the Republic, inhabited by a compact population of Gagauzans and Bulgarians. In 2002, the University had enrolled 1,700 students.

The transition to a market economy also raised the issue of the instruction of specialists in economics and business administration needed by the national economy. Thus, the preliminary steps were taken, by Government decision, on 25 September 1991, for the creation of the Academy of Economics of Moldova. In the first ten years of its activity, the Academy increased its enrollment from 3,800 to 8,500.

In 1992, following the armed conflict on the Dniester River, between Moldavian Government forces and the separatist regime in Transnistria, the T. G. Şevcenco Pedagogical State Institute at Tiraspol was divided into two institutions. One was evacuated to Chişinău and granted university status. The other is the current State University at Tiraspol enrolling about 3,200 students, most of whom are studying pedagogy.

A very new institution, the University of Cahul (7 June 1999), is dedicated to the training of teachers for pre-university education in southern Moldova.

By the end of the 1990s, the foundations of a modern and open system of education had been laid. The educational process is developing according to a new curriculum based on state educational standards. A national system of evaluation of the system of education has been developed, and the implementation of the European credit transfer system is underway. Student and staff mobility is expanding, as is the involvement of the universities of Moldova in international co-operation. A major strategic option for educational policy in Moldova is the development of a system of higher education able to satisfy the growing demand for higher education.

1.3. RECENT CHALLENGES IN HIGHER EDUCATION

At present, the development of higher education in the Republic of Moldova is governed by the fundamental objectives of education as stated in the acts adopted after 1991. These objectives include the ensuring of equal opportunities for education for all; education in the spirit of freedom and respect for fundamental human rights; and the diversification of professional education, according to labour market demand.

The stages of reform that the system of education has been undergoing have been determined by the need for the system to respond to social priorities: the suppression of political indoctrination in higher education and the ending of the excessive centralization of governance.

The strengthening of social and economic reform in the country, however, imposes the systemic reform of education, accompanied by a changed paradigm and changed logic in its organization. Such reform will affect the key positions in higher education, such as the role of the state in the higher education system, the relationship between education and the labour market, the financing of education, the efficiency of the system of education in general, and quality assurance in higher education. All of the above require high quality admission mechanisms and a high quality instructional process so as to ensure the recognition of qualifications obtained in the Republic of Moldova at European level.

The reform of higher education is focused on the modernization of the curriculum, the diversification of study programmes and course offerings, and their synchronization with the needs of the national economy and of the labour market. A major objective is the integration of Moldavian higher education into the European higher education area. It is hoped that the introduction of the European credit transfer system into Moldavian higher education will contribute to the achievement of this goal.

An incentive to improve the quality of higher education has been the introduction of academic evaluation and the accreditation of higher education institutions in Moldova that got underway in 2000.

The elaboration and implementation of educational standards in higher education, the modernization of the teaching process through the introduction of the information and communications technologies (ICTs), as well as the elaboration of a modern system of evaluation and assessment for higher education are all parts of the strategic orientation of Moldavian higher education.

In the aftermath of the political and economic changes of 1991, the system of education had to contend with new circumstances, characteristic of the transition to a market economy.

The reform of education, begun in the 1990s, faced a series of problems, among which the most serious was the under-funding of education, which entailed the exodus of the teaching staff, especially of the younger generation, and the continuing degradation of the technical and material infrastructure of educational institutions of all types.

Despite the fact that budgetary allocations for education have increased each year, the financing of the system of education is still inadequate. The amount of funding available to cover expenditures fails to ensure the basic activities of educational institutions, *i.e.*, instruction and education. Therefore, the education system fails to provide the conditions needed for the continuous improvement of its quality. For example, the allocation for 1998 for the consumption of electric power, water, and the provision of other services in the higher education institutions under the jurisdiction of the Ministry of Education represented 38 percent of the total expenditure included in the higher education budget.

Under the circumstances, the diversification of resources for the funding of universities is mandatory, as is, also, the creation and promotion of new financing mechanisms for the instruction of specialists in state higher education institutions, including the encouragement of private economic agents to contribute to the process. Increased university autonomy is also considered necessary.

The financial restrictions imposed by the austerity budget for education, and even more so, the political and economic instability of the Republic over the last decade, the frequent restructuring of the Ministry of Education and of the transferring of its high ranking staff, accompanied by equally frequent shifts in the orientations and priorities of whatever educational policy is being pursued – all of the above disturb the activity and hamper the efficient solution of the problems with which the reform of higher education is currently faced.

In the context of the European Union enlargement process, serious efforts are also demanded on the part of decision-makers in education aimed at harmonizing higher education legislation in Moldova with European policy in the field of education and at synchronizing the Moldavian system of higher education with the trends of educational development in the Western European countries.

Chapter 2

Governance of Higher Education at National Level

2.1. NATIONAL LEGISLATION

The Republic of Moldova does not have a law specifically dedicated to higher education. In principle, the 1994 Concept of Education [*Concepția învățământului*] and the Law on Education [*Legea învățământului*] of 1995 regulate the provision of public and private higher education.

In the Republic of Moldova, the Law on Education sets the prerequisites for the organization of a modern system of organization and monitoring of higher education, based on such principles as:

- the vertical and horizontal decentralization of managerial and educational responsibilities;
- the introduction of evaluation, licensing, and accreditation procedures;
- the setting up of a higher education system based on university autonomy and academic freedom affecting teaching, scientific activities, and publication.

The Law on Education adequately sets the legal framework for decision-making in the management of higher education and research, both at the governmental and the institutional levels. As a rule, decision-making is the prerogative of the collective governing and managerial bodies under the control of the competent public authorities.

After 1985, one of the basic changes in the governance of higher education institutions was the introduction of the principle of the autonomous selection of rectors. Previously, Party and State organs would appoint the rectors without any consultation of the public or of the given institutional staff.

Until 2002, the election of rectors took place according to the original version of the Law on Education that provided for the election of rectors by the academic senates of the given institutions on the basis of competitions held among eligible candidates. Winning candidates were confirmed by the Government. As of the 2002 Parliamentary revision of the Law on Education, the Ministry of Education appoints the rectors of higher education institutions. Each appointment is further confirmed by Government Decree. The Rectors, as well as the Rectors' Council, consider that this amendment challenges university autonomy.

According to the Law on Education, the basic mission of higher education is the training, instruction, and upgrading of specialists and researchers in various fields: education, science, research, culture, the national economy, etc.

Other objectives include the provision of postgraduate studies so as to ensure to graduates the possibility for them to realize their personal objectives, the promotion of scientific research, as well as the preservation, development, and promotion of the national scientific, cultural, and spiritual values.

The Law on Education specifies the principles according to which the structure of higher education is elaborated and the types of institutions, the general terms of student enrollment, the forms of study (day, extramural, and evening courses), the duration of course programmes, etc., are determined. The Law also includes a special provision regarding the links between teaching and research.

In addition, the Law regulates postgraduate, doctoral, and postdoctoral studies, scientific research in higher education, scientific and teaching degrees, the taxonomy of the academic staff, and the rights and obligations of both the teaching staff and the students.

Specific items in the Law refer to private education and to the accreditation of educational institutions, the administration of higher education institutions, and the financing of the system of education. A step in the direction of the democratization of higher education was the addition to the Law of an article dealing with university autonomy.

Essentially, the Law on Education is a framework law. It could not possibly include the operational details of the full system of education and research. Hence, the need, after 1995, to draft and to implement more targeted laws dealing with the actual aspects of the development of higher education and scientific research. Some of the laws adopted after 1995 are the following:

- The Law on the Evaluation and Accreditation of Higher Education Institutions in the Republic of Moldova (1997);
- The Law on State Policy regarding Research and Development (1999);
- The Law on the Implementation of the Regulations for the Evaluation and Accreditation of Educational Institutions (1999);
- The Law of the Academy of Sciences of the Republic of Moldova (2000);
- The Law on the Licensing of Certain Types of Activities (2001).

By the mid-1990s, the number of private universities, the quality of education of which was highly unsatisfactory, had significantly increased. It appeared necessary to develop a legal filter, more rigourous than that provided by the Ministry of Education, aimed at regulating the setting up of such institutions. To regulate the process, the Law on the Evaluation and Accreditation of Educational Institutions in the Republic of Moldova was adopted in 1997. It was followed, in 1999, by the Law on the Endorsement of the Regulations on the Evaluation and Accreditation of Educational Institutions.

The organic Law on the State R&D Policy, adopted in 1999, specifies the objectives and the basic principles of State policy in the field of scientific research and technological development and the types of research to be undertaken in higher education. It also regulates the relationships among R&D activities, the public administration authorities, and the beneficiaries of research results. The Law declares R&D to be a national priority, citing its important role in ensuring the sustainable development of the Republic of Moldova. Also, the Law establishes the Supreme Council for Science and Technological Development as the central public administrative authority in the R&D field. It is a buffer body of the Government of the Republic of Moldova. In co-operation with the Academy of Sciences of Moldova, the Council elaborates and promotes the national R&D strategy, identifies R&D priorities, and develops the technical and scientific state programmes as well as the mechanisms for the implementation of their results.

The Law on the Academy of Sciences of Moldova was adopted in 2000. It defines the legal status of the Academy as a state scientific institution, its role in research and development, and the principles of its organization and operation. The Law declares the Academy to be the highest scientific forum in the country, one that is autonomous and self-governing. The Academy of Sciences includes, among its components, the institutes for basic and applied research and technological development. These develop activities for the training of scientific staff through doctoral and post-doctoral studies. The mission of the Academy of Sciences is to contribute to the sustainable development of the Republic of Moldova through the results of the research and development activities that it engenders. The President of the Academy countersigns the normative acts issued by the Government in regard to R&D and higher education and programmes for the socio-economic development of Moldova. The Academy of Sciences is financed from the public budget, from its own research activities, and from external sources.

The legal framework of higher education and scientific research has been complemented by a set of Government decisions that were adopted in recent years. These have concerned the following:

- the adoption of the State Programme for the Development of Education over the 1999-2005 period (1999);
- the setting up of the National Council for the Academic Evaluation and Accreditation of Educational Institutions (2000);
- adoption of Regulations regarding the Speciality Commissions for Academic Evaluation and Accreditation of Educational Institutions (2000);
- adoption of Regulations concerning the Supreme Council for Science and Technological Development (2000);
- the setting up of and regulations regarding the Licensing Chamber (2001);
- the elaboration of Regulations on the Funding of the Research and Development Area (2002).

It goes without saying that the above-mentioned laws and regulations do not and cannot include the whole range of nuances concerning the activities of higher education and research institutions. In addition, the socio-economic and political life of the Republic is undergoing permanent changes, which, more often than not, require corrections of and amendments to official documents that have already been adopted. The Law on Education, in particular, has been greatly amended. For this reason, the latest opinion (one that is not unanimously shared) is that a new version of the Law might be needed or that separate laws concerning higher education, secondary vocational education, etc., should be adopted.

2.2. ADMINISTRATION AND FUNDING

The administration of the system of education in Moldova is carried out at two levels. At national level, the Ministry of Education and other concerned ministries are responsible for education. At local level, education is a responsibility of the county public administration bodies.

Following the creation of a new administrative territorial structure, the Republic of Moldova consists of ten counties plus an autonomous territorial unit – Gagauz-Yeri (Gagauia). A few years ago, a process for the decentralization of organizational and operational competencies in education was initiated.

Most of the competencies have been devolved to the county directorates, the territorial bodies for the administration of education, and to the local municipalities, a situation that helps involve local communities in solving any problems in their schools.

The local administration is responsible for the activities of the kindergartens, the primary and secondary schools, the gymnasia, the upper secondary schools, general culture schools, and the vocational schools in the given jurisdiction.

The Ministry of Education manages some of the vocational and technical schools, the schools for children with special educational needs, and certain universities, colleges, and other higher education institutions.

Other ministries, such as the Ministry of Health, the Ministry of Culture, the Ministry of Agriculture, the Ministry of Internal Affairs, and the Ministry of Defense administer certain higher education institutions that pertain to them.

At the same time, the Ministry of Education coordinates teaching and instructional activities in all state and private pre-academic and academic education institutions, irrespective of their administrative subordination.

The internal administration of the higher education institutions in the Republic of Moldova is two-tiered:

- the university level (a senate, a senate bureau, and an administrative council chaired by the respective Rector);
- the faculty level (a faculty council and a faculty council bureau headed by the respective dean).

As a central public administrative body, the Ministry of Education is accountable for the following activities relating to higher education:

- devising the strategy for and backing the state policy in higher education;
- planning the admissions to universities (setting the intake numbers) in terms of distinct specialities in co-operation with other ministries;
- drawing up the state registry of specialities and profiles in higher education in co-operation with the Ministry of Economic Affairs and the Ministry of Labour;
- organizing research activities in the universities subordinated to it;
- co-ordinating the funding of university budgets in collaboration with the Ministry of Finance;
- determining the terms and conditions of the salaries of the teaching staff in co-operation with the Ministry of Labour.

Notwithstanding the steps taken in favour of decentralization over the last two or three years, the system of education in the Republic of Moldova is still highly centralized. The attempt to decentralize the funding of pre-university education having failed, the Government adopted an intermediate formula by centralizing funding at the county level.

As for the higher education and research system, it has been, and, by tradition, still is financed from the public budget.

Being a country in transition to a market economy, the Republic of Moldova is facing many difficulties that are related to the adequate financing of education. Although, admittedly, all expenditures on education represent an investment in human resources and that, therefore, education should be a funding priority, public allocations to education are much smaller than what is needed. Also, the reduced living standard of the population can hardly be expected to favour any mechanism that would require parents to contribute to the costs of educating their children.

Suffice it to say that, at present, budgeted funding can hardly cover 40 percent of the costs of education and ensure the disbursement of salaries and study grants.

While during the 1970s and 1980s the budget and other funding allocated by Soviet Moldavia to education were fairly stable and the funds earmarked for higher education were increasing, this situation changed drastically during the 1990s.

Table 1. State and other funding resources allocated to education in the Moldavian Soviet Socialist Republic (1970-1986)

(in percentages of the national income)

Year	1970	1975	1980	1985	1986
National income expenditures	8.6	8.9	8.3	8.7	8.5

Source: Invățământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 70.

Table 2. Budgeted allocations for state higher education (capital investments not included) in the Moldavian Soviet Socialist Republic (1970-1986)

(millions of rubles)

Expenditures	1970	1975	1980	1985	1986
Total	229.0	323.2	400.0	501.3	531.3
With pre-university schools of all types	103.5	134.1	143.4	180.9	193.2
With higher education	19.8	25.9	32.8	37.5	37.8

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), pp. 70-71.

Table 3. Annual state budget expenditures per student in higher education institutions in the Moldavian Soviet Socialist Republic (1985-1986)

(in rubles)

Year	1985	1986
Moldavian Soviet Socialist Republic	1,193	1,222
Average across USSR	1,221	1,245

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 71.

In 1991, 1,370,200,000 rubles (21.4 percent of the total national budget) were allocated to education. The 1994 macroeconomic and financial crisis deeply affected public resources. Nevertheless, until 1996, the total public budget expenditure for public education increased slightly as a percentage of the GNP. After 1996, the level of funding dropped below 5.5 percent (2000).

Table 4. State budget allocations for education in the Republic of Moldova (1995-2000)

Years	1995	1996	1997	1998	1999	2000
MD Lei	566,764,000	800,148,400	851,761,700	612,452,000	619,728,900	544,000,000
Percent of GNP	8.7	10.4	9.6	7.0	6.1	5.3

Source: The Ministry of Education (Chişinău, 2001)

Table 5. Expenditures for higher education from the State budget in the Republic of Moldova (1999-2001) (universities subordinated to the Ministry of Education)

(in MD lei)

Years	1999	2000	2001
Total	27,079,500	32,512,200	41,504,800
Of which, for salaries	11,200,700	13,684,000	18,745,000

Source: The Ministry of Education (Chişinău, 2001)

The State guarantees, by law, an annual allocation of at least 7 percent of GNP to education and ensures the retention in the budget for education of the items concerning education to be financed. At present, however, the quota allocated to education is below the average of 5.5 percent of GNP.

As of 1996, the budgeted allocation for public expenditures on education has been decreasing. It had dropped to 21.7 percent of the state budget by 1998.

Table 6. Public expenditure for education in the Republic of Moldova (1990-1998)

(in percentages)

Year	Percent of the state budget
1990	17.2
1994	28.9
1995	22.9
1996	28.1
1997	24.9
1998	21.7

Source: The Ministry of Education (Chişinău, 2001).

The total expenditure per student in 1998 amounted to about $70 (USD), a rather small sum considering real needs.

Table 7. Distribution of current public expenditure by level of education in the Republic of Moldova (1996-1998)

(in percentages)

Year	Preschool and Primary	General Secondary	Vocational Secondary	Higher Education	Other forms
1996	24.5	46.8	6.2	13.3	9.2
1997	23.4	41.7	6.6	13.4	14.8
1998	23.4	40.7	7.1	13.2	15.6

Source: The Ministry of Education (Chişinău, 2001).

The present system whereby higher education is funded needs to be replaced with a view to improving the situation. Any new system should be based on a per-student type of funding, while capital investment in the system of public higher education should be made in the form of national programmes financed from both the public budget and from other sources (economic agents, donations, sponsorships, and tuition fees).

As of 1994, the public higher education institutions have been entitled to charge tuition fees for students admitted in excess of the admission quota established by the State. In 1995, the numbers of such students represented 30 percent of the total number of students admitted to the first year of studies in state institutions. In 2002, about 60 percent of the total of 83,000 students enrolled in the state colleges and universities were paying annual tuition fees. These fees were put into special accounts opened by the higher education institutions and managed according to Ministry of Finance regulations. Some of these funds are used as salary bonuses for the teaching staff, aimed at encouraging them to continue working in higher education, despite their low regular salaries. Another portion of these funds is used to develop the technical and material infrastructures of higher education institutions.

2.3. THE EVALUATION, ACCREDITATION, AND QUALITY CONTROL OF PUBLIC AND PRIVATE HIGHER EDUCATION INSTITUTIONS

In Moldova, the quality of higher education has traditionally been maintained by its being public and thus supervised by the Ministry of Education and other concerned ministries. The quality of the individual higher education institutions, their study programmes, and their teaching staffs are verified.

The Ministry of Education conducts the evaluation of higher education study programmes and makes certain that each programme reflects the minimal standards of higher education.

The state administrative bodies consider that educational standards should be the means whereby the quality of education is maintained and improved and teaching and learning methods, synchronized with the trends of educational development throughout the world.

A system of educational quality control, based on educational standards, is to become the most important element in the State attestation and accreditation system for higher education institutions.

Given the rapid increase in the numbers of universities and other higher education institutions, public and private, as well as of the numbers of students, Moldova must develop its own system of academic evaluation and accreditation for education institutions.

Until 2002, the academic evaluation and accreditation of universities and other higher education institutions, public and private, was the responsibility of the National Council for Academic Evaluation and Accreditation (CNEAA), established in 2000, by Government Decision. It was the principal governmental body charged with carrying out this task. It was also charged with informing the population about the educational capacities of the accredited institutions and the quality of their teaching staffs.

The National Council was composed of eleven members: a president, a secretary, and nine members representing the Ministry of Education, the Ministry of the Economy, the Ministry of Finance, the Academy of Sciences, and the Higher Commission for Attestation.

The basic responsibilities of the Council were to develop and implement the accreditation policies of education institutions, to undertake the academic evaluation and accreditation of all education institutions, irrespective of ownership and/or departmental subordination, and to develop indicators for self-evaluation and criteria and indicators for the academic evaluation of higher education institutions.

After reaching decisions regarding accreditation, CNEAA would transmit them to the Government for its approval.

As of August 2002, the responsibilities of the former National Council for Academic Evaluation and Accreditation have been devolved onto the Department of Academic Evaluation and Accreditation of the Ministry of Education. This Governmental Decision was taken despite the disagreement expressed by most of the higher education institutions in Moldova as well as by the Rectors' Council.

The academic evaluation and accreditation of education institutions is regulated by a set of acts: the Law on Education (1995), the Law Concerning the Evaluation and Accreditation of Higher Education Institutions in the Republic of Moldova (1997), the Law on the Endorsement of the Regulations on the Academic Evaluation and Accreditation of Educational Institutions (1999), and the Decision of the Government of the Republic of Moldova on the "Endorsement of the Regulations for the Speciality Commissions for the Academic Evaluation and Accreditation of Educational Institutions" (2000).

At present, two types of accreditation are in force: institutional accreditation and subject programme accreditation. The following three activities are evaluated: *(i)* teaching; *(ii)* research; and *(iii)* learning performance.

Academic evaluation is carried out in two stages: *(i)* the institutional internal evaluation or self-evaluation; and *(ii)* the external evaluation of the institution by the relevant speciality commission for evaluation and accreditation.

Institutional self-evaluation is based on pilot indicators which address the mission of the institution, its teaching and scientific activity, its instructional and governance staff, its students, the educational contents of its course programmes, its technical and material infrastructure, and its economic and financial activity.

The academic evaluation of higher education institutions is the mission of the specialized commissions for academic evaluation and accreditation of the Ministry of Education. These commissions are structured according to the profile of the given institution and the List of Specialities approved by the Parliament.

Speciality commissions include a president, a secretary, an economist, and at least three other members – highly qualified experts in the specialities to be accredited, representatives of ministries, departments, higher education institutions, institutes of the Academy of Sciences of Moldova, as well as representatives of enterprises and other organizations and institutions. If necessary, the commissions can also include specialists from other countries.

The commissions examine the self-evaluation report forwarded to the Ministry of Education by the concerned educational institution and inspects the institution on site. Based on the self-evaluation report by the concerned institution and the results of the inspections, the commissions draw up a report, one that can be general, on the accreditation of the institution, or restricted to a subdivision or speciality. The report is then forwarded to the Ministry of Education.

It takes the speciality commissions about one month to evaluate an institution and two weeks, at most, to evaluate a speciality.

Following the analysis of the self-evaluation report and of the report prepared by the president of the speciality commission, the Ministry of Education reaches a decision, by open ballot, as to the accreditation of the institution, in general, and of each speciality/profile in particular.

The decision to accredit is forwarded to the Government of the Republic of Moldova and comes into force as soon as it is endorsed by the government and is published in the official gazette, *Monitorul Oficial*.

Between 2000 and 2002, seven state universities, two private universities, seven state colleges, and two private colleges were evaluated and accredited.

The academic evaluation and accreditation of educational institutions has become an important factor in the development of the national system of education and its successful adoption of international standards.

2.4. HIGHER EDUCATION AND THE NATIONAL ECONOMY

At the present moment, the link between the system of higher education, research, and development, on the one hand, and industry and the national economy, on the other hand, seems to have weakened. The research results and innovative technologies offered by higher education and research institutions are not in demand in industry or in private small- or medium-sized enterprises. Indeed, the transfer of science and technology from the universities and research institutes to the national economy has not turned out well. Until 1990, higher education institutions and research institutes would undertake research and design activities in collaboration with and under contract to various enterprises, factories, and bureaux in the Republic and across the Soviet Union. However, this type of transfer is no longer active because the former industrial complex of the Republic has deteriorated. The plants are not operating or have been restructured to produce items that do not require intensive technologies. Another reason why the transfer of technology is no longer taking place is that young specialists, freshly graduated from universities, cannot easily find employment in what is left of Moldavian industry.

Other explanations can be given for the poor state of the relationships of higher education, research, and the economy. The value of domestic scientific results is underestimated. Decision-makers and society in general are unaware of the vital role of the new technologies and of innovation in the development of the economy. Hence, the imperative to grant priority to the support of science and higher education is not respected.

As a consequence, science and higher education no longer benefit from any external financing in addition to the modest budgeted allocations that they receive, which, in 2001, amounted to only 0.18 percent of GNP. These harsh realities have entailed considerable cutbacks, if not outright suspensions, in spending for the refurbishment of the technical and material infrastructure and for the purchase of modern laboratory and research equipment.

Owing to the low salaries, the size of the higher education institutional staff has shrunk dramatically and brain drain among young researchers has increased. The average monthly salary of a scientific researcher is equal to only 60 percent of the average monthly salary in the economy.

Table 8. Budgeted expenditures for science in the Moldavian Soviet Socialist Republic and in the Republic of Moldova (1985-2002)

(in percentages of GNP)

1985	1990	1995	2000	2001	2002
0.41	0.48	0.34	0.18	0.18	0.18

Source: The Supreme Council for Science and Technological Development (Chişinău, 2001).

According to the forecast of the Supreme Council for Science and Technological Development, the situation could have serious social and political consequences leading to damage to the national R&D system, a decrease in the quality of higher education, an increase in the rate of emigration of young researchers abroad, and, as a further consequence, the continued decline in the standard of living of the population.

To conclude, one way to redress the economy is through a revival of co-operation among higher education, research, production, and private entrepreneurship, with the aim of implementing technical and scientific achievements. This solution presupposes a link between R&D themes and the demands of industry, which, in its turn, will increase the impact of R&D activities and their efficiency. Also, it seems possible that one solution to the problem could be achieved through the restructuring of the domain of research, particularly through the elaboration of a new concept of research financing based on competitive research projects, on the expansion of the system of research contracts, and on the promotion of centers of excellence in scientific research and technological development.

Table 9. Numbers of specialists employed in the national economy of the Moldavian Soviet Socialist Republic (1965-1987)

Years	Numbers of specialists (thou)
1965	50,900
1970	79,000
1975	118,500
1980	155,700
1985	191,600
1986	198,000
1987	206,200

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 4.

Table 10. Numbers of employees in education in the Republic of Moldova (1997-2001)

	1997	1998	1999	2000	2001
Total employees in education	149,700	144,100	131,200	124,400	122,300
Total employees in economy (%)	13,600	14,300	16,300	17,900	17,700
Of which women (thou)	113,100	109,600	98,800	93,300	90,900
Women of total employees in economy (%)	19,800	21,000	23,400	25,300	25,000

Source: Republica Moldova in cifre [The Republic of Moldova in Figures], Chişinău, 2002, pp. 22-26.

Table 11. Monthly average nominal salary in education in the Republic of Moldova (1996-2001)

(in MD lei)

	1996	1997	1998	1999	2000	2001
Monthly average salary throughout the economy	187.10	219.80	250.40	304.60	407.90	543.70
Monthly average salary in education	156.70	170.90	183.00	193.00	247.70	336.90
Minimal monthly consumption budget per inhabitant	387.80	439.50	473.00	661.80	944.50	1053.00

Source: Republica Moldova in cifre [The Republic of Moldova in Figures], Chişinău, 2002, pp. 44 and 47.

Chapter 3

Institutional Patterns and Quantitative Developments

3.1. NUMBER AND TYPES OF HIGHER EDUCATION INSTITUTIONS (PUBLIC AND PRIVATE)

The Law on Education (1995) established the new structure for the system of higher education in the Republic of Moldova. It is based on long- and short-term programmes developed by the higher education institutions. There are two types of higher education institution: universities (and other university-level institutions) and colleges. Academies and institutes are included in the category of other higher education institutions. It is worth mentioning that, until 1990, Moldova had only higher education institutes and only one university.

While universities, academies, and institutes offer long-term study programmes (from four to seven years in duration), colleges offer short-term courses of two to three years.

Colleges have emerged as a result of the reorganization (often formal) of the former technicums and other secondary education speciality institutions of Soviet Moldavia, that used to offer mid-level qualifications (for technicians of different kinds). Indeed, this purpose explains the elevated numbers of colleges and their eclectic structure in which the secondary-school cycle was also included. Colleges operate either as distinct educational units or as university affiliations.

With the exception of the graduates of the University of Medicine and of Pharmacy, all other graduates are awarded a *licență* diploma (similar to a Bachelor's degree) after they have passed the *licență* examination and have defended their *licență* theses.

Graduates of the University of Medicine and Pharmacy are awarded their titles after they have attended and completed their residencies.

Students who waive or fail their thesis defenses are awarded a Diploma of University Higher Studies (*Diploma de studii superioare universitare*), on the condition that they have been enrolled in studies based on the same higher education programme and for the same duration (*e.g.*, four years and eight semesters for students admitted on the basis of an awarded baccalaureate). According to certain opinions, the award of two different types of diploma for graduation from the same study programme is not justified.

The political, economic, and social changes that have taken place in the Republic of Moldova over the last decade of the Twentieth Century have encouraged the diversification of the higher education system. A new type of higher education institution, *i.e.*, the college, has emerged offering shorter study cycles, with a distinct vocational orientation. Also, private higher education institutions have been set up and operate in parallel to the state higher education institutions.

Depending on their profiles, the state colleges are affiliated to the universities. Some of them are structural units of the given university. Other colleges function as independent institutions.

The colleges have emerged in response to the demands of the national economy and of the labour market for highly qualified and practice-oriented specialists.

The available college programmes are of two to three years in duration.

College studies end with graduation examinations and the defense of a diploma paper. The Diploma of Short-Term Higher Education (*Diploma de studii superioare de scurtă durată*) allows holders to either continue their university studies or to enter the labour market.

The universities and the other higher education institutions also offer postgraduate Master's Degree studies of one to three years in duration. At graduation, each candidate is awarded the title of *magistru* and a Master's Degree Diploma (*Diploma de magistru*).

Doctoral programmes (three years in duration for full-time courses, and four years in duration for extra-mural courses) aim at training highly qualified specialists and are offered by all the higher education institutions. Following the successful defense of a doctoral thesis, each candidate is granted the title of Doctor of Sciences (*Doctor în ştiințe*).

A second scientific title, that of *Doctor habilitat*, is granted in Moldova following the public defense of a thesis.

The doctoral and the *Doctor habilitat* theses are defended before an expert panel assembled by the High Commission for Attestation. The Commission also approves the award of the two corresponding titles.

School teachers are educated in five higher education institutions: the Ion Creangă State Pedagogical University in Chişinău, the Alecu Russo State University in Bălţi, the State University in Tiraspol, the State University in Cahul, and the National Institute for Physical Education and Sports in Chişinău.

The initial education of kindergarten and primary school teachers is the responsibility of pedagogical colleges and linked universities. Gymnasium and high school teachers are trained in pedagogical universities.

Higher education teaching staff members take in-service refresher courses in the form of specialization stages as well as Master's, Doctoral, and Postdoctoral courses offered by higher education institutions in Moldova and abroad.

In a true democratic spirit, the Law on Education recognizes and regulates the private higher education sector that makes its contribution to the further diversification of higher education. The numbers of private higher education institutions increased significantly in the 1990s. It should be mentioned that the Law does not provide for the privatization of state institutions.

In the private education institutions, the teaching is patterned on the study programmes that have been developed and co-ordinated by the Ministry of Education.

The most highly qualified teaching staff members in the state universities are attracted to the private institutions because of the freedom these institutions offer to staff members to put into practice their own teaching plans and programmes as well as by the higher salaries that the private education sector offers.

In 2002, there were fifteen state higher education institutions (ten universities, three academies, and two institutes), forty-four state colleges, thirty-one private universities, and twenty-three private colleges in the Republic of Moldova.

During the 2001-2002 academic year, 86,414 students were enrolled in private and state higher education institutions, of which, 73 percent in state institutions. Also, 42 percent of the students enrolled in state universities were paying tuition fees. In 2001, the student ratio was 238 students to 10,000 inhabitants, as compared to 162 to 10,000, in 1996.

In 2002, 17,000 students were enrolled in state and private colleges, of which 82 percent were in state colleges. Of the total number of state college students, 23 percent were paying tuition fees.

Nine universities and twenty-five colleges are subordinated to the Ministry of Education. The rest of the universities belong to other ministries (the Ministry of Health, the Ministry of Culture, the Ministry of Agriculture, and the Ministry of Internal Affairs).

The university teaching staff includes about 4,700 professors, including 1,800 holders of the doctorate in sciences and 281 holders of the habilitated doctorate. The college teaching staff numbers about 2,600 professors.

Table 12. Student enrollments in higher education institutions in the Moldavian Soviet Socialist Republic (1945-1959)

Academic year	Higher education institutions	Total students (full-time and extramural education)	Extramural education students
1945/46	6	3,232	906
1950/51	8	8,716	3,395
1951/52	8	10,597	4,302
1952/53	8	11,782	4,686
1953/54	9	13,956	5,668
1954/55	7	16,243	7,062
1955/56	7	17,162	7,646
1956/57	8	17,758	7,795
1957/58	8	16,948	7,123
1958/59	8	16,244	6,702
1958/59 *vs.* 1950/51 (%)	100	186	197

Source: Economia naţională a RSS Moldoveneşti: Anuarul statistic [The National Economy of the Moldavian SSR: Statistical Yearbook] (Chişinău, 1959), p. 218.

Table 13. Student enrollments in higher education institutions in the Moldavian Soviet Socialist Republic (1970-1987)

Academic year	1970-1971	1980-1981	1985-1986	1986-1987
Student numbers	44,800	51,300	53,200	52,100

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 11.

Table 14. Student enrollments in full-time courses in higher education institutions in the Moldavian Soviet Socialist Republic during the 1985-1986 academic year, by Ministry

Ministry	Student numbers
Ministry of Education	21,680
Ministry of Agriculture	3,929
Ministry of Health Care	5,201
Ministry of Culture	421
Total	31,220

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 64.

Table 15. Ratio of students per 10,000 inhabitants in the Moldavian Soviet Socialist Republic (1970-1987)

Academic year	1970-1971	1980-1981	1985-1986	1986-1987
Moldavian Soviet Socialist Republic	124	128	128	126
Average for the USSR	188	196	185	181

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 10.

Table 16. Ethnic composition of the quota of first-year students in higher education institutions in the Moldavian Soviet Socialist Republic at the beginning of the 1987-1988 academic year

	(in percentages of the total)
Moldavians	64.4
Russians	14.7
Ukrainians	12.7
Bulgarians	2.0
Gagauzans	1.8
Jews	2.2
Other nationalities	2.3

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 12.

Table 17. Student enrollments in the universities and the other higher education institutions of the Ministry of Education in the Republic of Moldova (1996-2000)

(in figures)

Academic year	1996-1997	1997-1998	1998-1999	1999-2000
Universities	8	8	8	9
Students	38,610	42,935	45,828	47,223
Teaching staff	2,518	2,611	2,664	2,704

Source: The Ministry of Education (Chişinău, 2001).

Table 18. Student enrollments in the colleges of the Ministry of Education in the Republic of Moldova (1996-2000)

(in whole numbers)

Academic year	1996-1997	1997-1998	1998-1999	1999-2000
Colleges	18	18	23	24
Students	13,081	13,477	15,112	12,848
Teaching staff	1,351	1,165	1,445	1,228

Source: The Ministry of Education (Chişinău, 2001).

Beginning in 1994, the private higher education institutions were issued licenses to operate. As of 2001, the Ministry of Education issued licenses for the setting up of private higher education institutions. Later on, the State Chamber for the Granting of Licenses (a governmental entity) acquired this responsibility.

The largest number of private universities to be opened in one year was twelve – in 1998. In the following years, only four or five operating licenses were issued per year. In 2001, only four licenses for higher education institutions were authorized, as compared to twelve in 1998, and, in 2001, five operating licenses were withdrawn, and two others were suspended. In each case, the given higher education institution had failed to observe certain stipulated requirements.

Since 1995, twenty private colleges have been opened, with a student enrollment 2,000.

About 27 percent of the total number of students are pursuing their studies in private universities. About 41 percent of the total are pursuing extra-mural education. Of these, 35 percent are studying economics, and 25 percent, law.

The teaching staffs of the private universities include about 2,100 professors, of which only 62 percent are tenured professors of the given universities.

At present, private universities are registered as being non-governmental organizations (NGOs), limited liability companies (SRLs), or joint stock ventures (SAs).

The Ministry of Education has drawn up an amendment to the Law on Education according to which private education institutions are required to register as education institutions, not as NGOs, SRLs, or SAs.

Table 19. Numbers of licenses per year issued to private higher education institutions in the Republic of Moldova (1994-2001)

Year	1994	1995	1996	1997	1998	1999	2000	2001	Total
Universities	1	2	6	4	13	9	5	2	42
Colleges	-	2	2	2	4	8	5	-	23

Source: The Ministry of Education (Chişinău, 2002)

Table 20. Teaching staff in public and private education in the Republic of Moldova (1996-2000)

(percentages of the total)

Public sector		Private sector	
1996	2000	1996	2000
99.3	98.3	0.7	1.6

Source: *Republica Moldova: Dimensiunile reformelor* [The Republic of Moldova: Size of Reforms] (Chişinău, 2002), p. 273.

3.2. ACCESS AND ADMISSIONS

In Moldova, a selective admission system (*numerus clausus/numerus fixus)* is applied, according to which the number of admitted students is restricted to a quota imposed by the State (the so-called State Command). According to such a system, access to higher education means having permission to take part in the admission competition. When the number of places in higher education is limited, of the total number of candidates having access to higher education, only those having passed the admission competition are admitted.

Therefore, in actual fact, some high-school leavers, although having satisfied the conditions for access, are not admitted to higher education, that is, they cannot actually make use of their right to study within a given higher education programme.

Table 21. Distribution, as of 1 December 1987, of the upper secondary school-leaving cohort of 1987 by educational field in the Moldavian Soviet Socialist Republic

Field	High-school leavers	Percentage of the total
Total number of upper secondary school leavers	32,192	100.00
Upper secondary school leavers pursuing studies in various fields	21,200	66.10
Upper secondary school leavers in higher education institutions	5,700	17.70
Upper secondary school leavers in technical and other secondary speciality education	3,800	12.00
Upper secondary school leavers in technical and vocational schools	9,300	29.00
Upper secondary school leavers attending various courses	2,400	7.40

Source: Invățământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), pp. 33-34.

In the Republic of Moldova, admission to private and public higher education (universities and colleges and day and distance education courses) is based on competition, according to the Regulations on the Organization and Development of the Higher Education Admission Examinations. The regulations are approved by the Ministry of Education each year.

The documents required for access to a university include the Baccalaureate Diploma, the Certificate of General Studies, the Diploma of Secondary Vocational Studies, and other equivalent study attestation documents.

The admission examination is organized by educational institutions according to profiles and specializations. Every year, the institutions forward the list of disciplines to be covered by the admission examinations and propose a form for the examination (written or oral) for approval by the Ministry of Education. The admission competition subjects are drawn up according to the study programmes in force.

According to the Constitution, higher education is free of charge. However, in state universities financed from the public budget, the number of places is restricted and set by Government Decree (the so-called, State Command). The total numbers of places available in higher education is approved every year according to profiles and specialities.

In 2002, the total number of places available for higher education included 5,725 places in universities and 3,505 places in colleges.

In addition to the budget-funded places set by the Government, state universities have the right to organize admission procedures for tuition fee-paying places. This type of admission is called fee-contract admission, for each such candidate must sign a contract with the institution in question. The contract stipulates the amounts and the installments of the tuition fees that the student must pay.

Only the capacity of the teaching staff and the technical and material infrastructures of universities limit the number of tuition fee-paying places in state universities.

The size of the fee varies, from one university to another and in function of the speciality chosen, between 1,000 – 10,000 MD lei per study year (*i.e.*, between 100 and 1,000 USD).

Tuition fee-paying education is organized, in particular, in the specialities that are in great demand: law, economics, foreign languages, and international relations.

In order to take the admission examination for higher education, candidates must be citizens of the Republic of Moldova, graduates of secondary education, and holders of the baccalaureate diploma or of the certificate for intermediate general culture studies, or graduates of short-term higher education (colleges) and holders of a diploma of short-term higher education.

Citizens of the member countries of the Community of Independent States (CIS) and of the Baltic countries who are of Moldavian (Romanian) nationality have the same rights to admission as the citizens of the Republic of Moldova.

Foreign citizens and stateless persons may be admitted to higher education in certain circumstances:

- according to the terms of international conventions to which the Republic of Moldova is a signatory;
- according to intergovernmental and interministerial agreements and protocols;
- as per agreements among authorized education institutions as provided by the legislation in force;

- as per individual contracts with educational institutions.

Based on their admission results, admitted candidates are enrolled in the first study year, by order of the Rector (director) of the given higher education institution, into the places designed for each profile, specialization, form of education, and language of instruction.

3.3. ENROLLMENT AND GRADUATION

Table 22. Graduates of the higher education institutions in the Moldavian Soviet Socialist Republic (1945-1958) (extramural study branches of Moscow institutions not included)

(in whole numbers)

Year	Graduates
1945	200
1946	368
1947	419
1948	693
1949	899
1950	1,370
1951	1,615
1952	1,818
1953	1,967
1954	2,613
1955	2,071
1956	2,313
1957	2,140
1958	3,100
Total	21,586

Source: *The National Economy of the Moldavian Soviet Socialist Republic in 1964: Statistical Data* [in Russian] (Chişinău, 1965), p. 370.

Table 23. Graduates by institution of higher education in the Moldavian Soviet Socialist Republic (1952-1958) (extramural study branches of Moscow institutions not included)

(in whole numbers)

Higher education institution	Graduates
Chişinău State University	2,167
Chişinău Agricultural Institute	2,085
Pedagogical and Primary School Institutes	10,287
Chişinău Institute of Medicine	1,168
Chişinău State Conservatory	226
Higher Party School	89
Total graduates	16,022

Source: *The National Economy of the Moldavian Soviet Socialist Republic in 1964: Statistical Data* [in Russian] (Chişinău, 1965), p. 371.

Table 24. Graduates of the pedagogical institutes in the Moldavian Soviet Socialist Republic between 1970-1987

(in whole numbers)

Years	Institutes	Graduates
1970	3	2,700
1980	3	2,600
1985	3	2,700
1986	3	2,400
1987	3	2,200

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 16.

Table 25. Students in the higher education institutions of the Moldavian Soviet Socialist Republic between 1970-1988

(in whole numbers)

Academic year	1970-1971	1980-1981	1985-1986	1987-1988
Institutions	8	8	9	9
Total students	44,800	51,300	53,200	52,100
Students in the first year	8,300	10,400	11,300	11,700

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), pp. 62-63.

Table 26. Graduates of the higher education institutions in the Moldavian Soviet Socialist Republic (1970-1987)

(in whole numbers)

Graduates	1970	1980	1985	1987
Total diploma graduates	6,900	8,300	9,100	7,700
Of which, in engineering	1,100	2,000	2,200	2,200

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 7.

Table 27. Students in tehnicums and other institutions of intermediate speciality education in the Moldavian Soviet Socialist Republic in selected academic years between 1970 and 1988

(in whole numbers)

Students	1970-1971	1980-1981	1985-1986	1987-1988
Institutions	46	51	53	52
Total students	51,700	58,900	60,600	59,000
First year students	16,100	18,200	19,400	18,800

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 61.

Table 28. Graduates of tehnicums and other intermediate speciality institutions in the Moldavian Soviet Socialist Republic (1970- 1987)

(in whole numbers)

Graduates	1970	1980	1985	1987
Total diploma graduates	11,800	17,000	17,100	17,300
Of which, technicians	4,200	6,900	6,300	6,300

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 7.

3.4. CHALLENGES OF THE NEW INFORMATION TECHNOLOGIES

Given the circumstances of globalization and transition to a post-industrial information society, the progressive development of the national economy of the Republic of Moldova is directly dependent on the use of advanced technologies and the promotion of an efficient system of education.

The need to link the reform of education to the social and economic reforms underway in Moldova involves the need to optimize the existing system of education and to implement new methodologies for the design, organization, control, financing, and evaluation of education, with a view to ensuring its alignment to European Union standards. In education, and especially in higher education, such an alignment can be achieved through the implementation of the new information and communication technologies. So doing will empower the system of education to better respond to the challenges of the Twenty-First Century.

At present, Moldova lacks both structures enabling it to promote the new technologies in teaching, learning, evaluation, and educational management and the structures needed to ensure the collection, processing, and dissemination of information pertaining to the operation and reform of the system of education.

The application of the new information and communication technologies in the teaching, learning, and evaluation process plays a major role in ensuring the quality of higher education.

For the moment, the higher education institutions in Moldova are not yet ready to implement the new information technologies.

Currently, a project is being developed, that of a National Programme for the Implementation of ICT in Education, which includes all the required elements: provision of equipment, the initial and in-service preparation of the teaching and administrative staff, the elaboration of the needed programming software, net building, and the provision of access to the global information networks and services.

For the moment, the system of education, higher education included, is facing a series of obstacles.

- It lacks databases organized according to the International Standard Classification of Education (ISCED) and structured by level of education.
- It lacks access to internal sources of methodological and scientific information and to the Internet.
- The lack of educational software and the inadequate training of the teaching staff hinder the implementation of the information and communication technologies. This situation also explains why distance education is not encouraged. Given the circumstances, it is difficult to create a participative system of education and to ensure public access to information, thus making the education system operate transparently.

This situation prevents the system of higher education in Moldova from responding to the demands of the labour market. Higher education in Moldova should radically modify its curriculum and at the same time stress the development of lifelong learning skills and creativity as well as the use of the ICTs in the process of instructing highly qualified specialists for the national economy including research and development.

The implementation of the ICTs in higher education and the creation of an informational environment, which would ensure the training of specialists according to contemporary academic standards, presuppose the provision, in the next four or five years, of the conditions required for the implementation of the ICTs in the process of teaching, R&D, and university management.

Achieving these objectives requires great efforts to train specialists in computer sciences. According to the teaching programmes and curricula, basic and applied software laboratories are organized and teaching materials and instructions are being prepared for the study and use of the specialized software. Specialists in other fields are also being trained in the use of these technologies.

With a view to using the information and communication technologies in daily and final student evaluation, the teaching staff is periodically trained in the use of computer-aided teaching technologies.

Universities are in the process of organizing virtual laboratories for the instructional process, of implementing multimedia systems, and of purchasing and setting up mini-libraries specialized in the information and communication technologies.

A special place is being granted to the support of R&D activities in universities. The support consists of the provision of information services (including hardware, software, and links to the global network). Specialized R&D laboratories are being organized for researchers and students.

The computerized management of universities takes place, first of all, at the level of the rector's office. The implementation of modern information technologies of the client-server type is being achieved with the help of students.

Also, the information systems of university libraries are being developed. Most of the universities have set up local information networks that serve both internal and external customers.

Almost all the Moldavian universities have designed Web pages. The design of a single network to include all the universities is being envisaged.

3.5. INTERNATIONAL RELATIONS AND MOBILITY

According to the statistics, the number of Moldavian students studying abroad has increased significantly in recent years.

For example, during the 2000-2001 academic year, 5,269 Moldavian students were studying in Romanian universities, 467 students in Ukrainian universities, 339 in Bulgarian universities, 187 in Turkish universities, 45 in Russian universities, and 12 in Chinese universities.

Their number is on the rise, having increased by 20 percent in the last three or four years alone.

Also, the numbers of foreign students enrolled in the universities of Moldova have increased. During the 2000-2001 academic year, Moldovan universities enrolled 437 Romanian students, 600 Ukrainian students, 49 students from other CIS countries, 533 students from Syria, 71 students from Turkey, and 69 students from the Sudan.

The rapid expansion of academic mobility in the last ten years prompted the decision of Moldova to sign the Convention on the Recognition of Qualifications Concerning Higher Education in the Europe Region. The Convention, the so-called Lisbon Convention, was ratified by the Parliament of the Republic of Moldova on 23 September 1999 and came into force on 1 November 1999.

The body responsible for the recognition of final qualifications in higher education in Moldova is the Ministry of Education. It is authorized to adopt official and mandatory decisions concerning the recognition of qualifications obtained abroad.

Currently, a buffer organization is being set up by the Ministry of Education, the National Center for Information concerning academic mobility and recognition. However, the Center lacks adequate resources to establish the needed contacts with the national information centers in other countries and with the ENIC network.

In 2002, the Ministry of Education imposed the mandatory use, by Moldovan higher education institutions, of the Diploma Supplement of the UNESCO/Council of Europe type, recommended to the signatory countries of the Lisbon Convention. It is intended to increase the transparency of higher education qualifications earned in Moldova.

The mobility programmes assist in the recognition abroad of the Moldovan higher education qualifications of Moldavian students. These same programmes also complement the agreements concluded among institutions in Moldova and elsewhere concerning both individual students and groups of students and covering a specified study period. The Technical University of Moldova, the State University of Moldova, and other institutions have concluded bilateral agreements within the organized exchange system.

Table 29. Students in the Moldavian Soviet Socialist Republic sent to study in cities across the USSR (1981-1987)

(in whole numbers)

Year	Students
1981	557
1982	547
1983	590
1984	523
1985	519
1986	350
1987	298

Source: Invăţământul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 14.

At present, exchanges of students, teaching, and research staff take place both within the framework of bilateral, intergovernmental, and interministerial agreements (which may be labeled as *organized mobility*), as well as at individual level (so-called *spontaneous mobility*).

The Bilateral Co-operation Protocol between the Ministry of Education of the Republic of Moldova and the Ministry of Education and Research of Romania provides for the admission to higher education studies in Romania of Moldavian students fluent in the Romanian language. The protocols concluded with Ukraine, Bulgaria, and Turkey stipulate the sending to higher education institutions in these countries of Moldavian students belonging nearly exclusively to the respective ethnic group. Thus, in 2000, twenty-five students of the thirty admitted to study in Turkey were ethnic Gagauzans, and ninety students of Ukrainian nationality were sent to study in the Ukraine along with ten more students of different ethnicities.

Table 30. Moldavian students admitted to study in universities as per collaboration agreements concluded by the Ministry of Education (1996-2000)

(in whole numbers)

	1996	1997	1998	1999	2000
Romania	700	750	800	1050	1000
Ukraine	65	74	100	100	100
Russia	-	-	-	15	27
Bulgaria	67	54	57	48	65
Turkey	20	25	26	30	30

Source: The Ministry of Education (Chişinău, 2001).

Table 31. Foreign students enrolled in the universities of the Republic of Moldova (1996-2001)

(in whole numbers, beginning of the year)

Students	1996	1997	1998	1999	2000	2001
TOTAL	1,187	1,437	1,594	1,882	2,234	2,505
of which, from						
Romania	154	123	309	297	437	478
Ukraine	353	417	503	598	600	588
Russian Federation	15	141	32	38	43	60
Turkey	17	43	67	74	71	110
Syria	402	377	346	339	533	584
Jordan	102	118	162	243	302	331

Source: Republica Moldova in cifre [The Republic of Moldova in Figures] (Chişinău, 2002), p. 94.

Given the growing intensity of student mobility, the issues concerning the mutual recognition of studies, study periods, and qualifications among universities and other higher education institutions in the Republic of Moldova and the European Union countries have acquired a special significance, for recognition ultimately means a reduced risk that such qualifications will be under-evaluated.

The issue of the recognition of higher education qualifications arises, first of all, because of essential differences existing between the general philosophy of education in Moldova and that of various European countries. The differences in question are particularly felt with regard to exchange processes and concern both the content of higher education (for example, the ratio of general instruction to speciality instruction), and the procedures for admission to higher education.

Second, considerable differences remain between the structure of the national system of higher education in Moldova and the structure of the education systems in the countries of Western Europe that have been greatly modified through the diversification of their higher education systems.

In addition, as educational reform in Moldova, particularly the reform of the higher education system, began in the aftermath of the political, ideological, and economic changes of 1989-1991, diploma equivalence between Moldova and other European countries has become difficult.

At present, higher education in Moldova has achieved an improved level of co-operation with the world community. International co-operation is being expanded by means of various international programmes in which the Republic of Moldova is taking part. These include TEMPUS, COPERNICUS, and others. They are contributing to the expansion of collaboration and co-operation and to the development of the exchange of values in the scientific, cultural, and spiritual domains.

Chapter 4

Governance and Administration at Institutional Level

4.1. GOVERNANCE

The operation of higher education institutions in the Republic of Moldova complies with the university charters that have been adopted by the university senates of each institution.

In the period of transition to a market economy that is still going on, all fields of social life are being restructured. However, the reform of the management of higher education institutions has been somewhat delayed. The changes that have taken place in the state universities are, in the best of cases, of a cosmetic nature, as the structure and principles inherited from the socialist era have been retained. The present rules and regulations of universities as well as the instructions that have emanated from the Ministry of Education attest this reality. The unsatisfactory quality of the norms adopted has affected the development of the system of education and has lowered the value of the diplomas awarded by universities.

The legislation of the country fails to define what a higher education institution, a university, and/or an institute are. Likewise, the law fails to specify the organizational and legal status of the state and private higher education institutions. Are they state enterprises, joint stock ventures, limited liability enterprises, or civic associations? Under the circumstances, it is difficult to ensure the efficient governance of the various higher education institutions.

The universities are composed of faculties, departments, chairs, laboratories, institutes, and research and design sections.

The Ministry of Education appoints the following administrative staff members: rectors, vice-rectors, deans, vice-deans, directors of study services, and chairpersons.

A senate, headed by a rector, governs each university, the operational management of which is ensured by a senate bureau, which includes a rector, vice-rectors, and a scientific secretary.

Each university rector is elected by a given senate. He or she is appointed by the Ministry of Education and is endorsed by the Government. The election procedure for a rector complies with rules that have been drafted and promulgated by the Ministry of Education.

The vice-rectors of higher education institutions are appointed or dismissed by order of the respective rector, with the approval of the Ministry of Education and the other ministries concerned. The Ministry of Education and the other ministries involved in higher education determine the number of vice-rectors, on the recommendation of the respective Rector, to be employed at each institution.

Deans and *chairpeople* are elected on a competitive basis for five-year terms. Elections are organized by senate commissions in each institution. The same person may occupy a deanship or a chair for no more than two consecutive terms unless he or she holds a habilitated doctorate or is a university professor. In the latter case, he or she may run for a third consecutive term.

Candidates for deanships are recommended by faculty chairpeople, faculty union committees, or by tenured professors in the concerned faculties. Each faculty General Assembly makes a recommendation to the Senate of the given institution.

Assistant deans are recommended for appointment to their positions by their respective deans and are later formally appointed by the rector of the given higher education institution.

The general requirements to be met by candidates for senior administrative positions in higher education institutions in Moldova include the following:

- to be a citizen of the Republic of Moldova;
- to hold a scientific title and a teaching degree in the given field;
- to know the language of the country;
- to present a project on the activity of the institution/unit;
- to be under the mandatory retirement age.

In colleges, the instructional process is steered by the teachers' council, while the administrative council supervises the administrative governance. The minister of the pertaining field of activity appoints the college director.

The Law on Education allows each university to be autonomous as per governmental regulations. To be autonomous, state and private universities must undergo the accreditation procedure that was initiated in 2000.

University autonomy presupposes self-determination in regard to administration, teaching, and research activities, as well as financial independence, the right to engage in economic activities, and freedom to make contacts and to co-operate with foreign universities.

At present, a contradictory situation exists, characterized by the fact that the universities and the state authorities have different interpretations of the meaning of autonomy. The tendency of the State is to limit university autonomy through its control over the budget for the state funding of higher education institutions.

This situation is also the result of imperfect legislation that does not provide for adequate conditions regarding the efficient governing and management of higher education institutions. Given the circumstances, the improvement of higher education management remains a problem to be solved.

In addition to the Ministry of Education, other bodies are also active in higher education, such as the Supreme Council for Science and Technological Development, the Higher Attestation Commission, the Licensing Chamber, as well as non-governmental organizations, such as the Rectors' Council and the Council of College Directors.

4.2. BUFFER ORGANIZATIONS AND THE COLLECTIVE REPRESENTATION OF HIGHER EDUCATION (THE RECTORS' CONFERENCE)

The autonomous Supreme Council for Science and Technological Development was established in 1999 and operates under the authority of the Government. The Council is a buffer organization placed between the scientific community and the Government in regard to the allocation of research funds and the evaluation of the results of research. The Supreme Council for Science and Technological Development consists of twenty-three members. Six of these members represent the ministries/departments and the Higher Commission for Attestation. Six other members represent the Science Academy of Moldova. Five members represent the higher education institutions of the country, and three additional members represent the state enterprises.

The purpose of the Council is to strengthen the institutional framework of collegial competition in the academic community so as to enable it to encourage and promote true scientific values, to stimulate researchers and research teams, and to create the framework needed to train young researchers.

In addition, another body, the Consultative Expertise Council, organizes and coordinates the entire expertise activity.

The Council's main competencies are the following:

- coordination of the academic, university, and branch sectors of R&D;
- coordination of the assessment process and of the processes by which R&D results are implemented and new technologies are introduced into the national economy;
- coordination of international relations at state level in R&D and technological development;
- coordination of R&D staff training through doctoral and post-doctoral studies.

The Higher Attestation Commission of the Republic of Moldova is the supreme body authorized to award the scientific titles of Doctor and Habilitated Doctor, granted by the specialized scientific councils of the higher education institutions, by the Academy of Sciences of Moldova, and by research institutes. Also, the Commission approves the granting of the academic titles of university professor and associate university professor, awarded by universities. The president and the members of the Commission are appointed as per Government decision.

The Licensing Chamber of Moldova was established in 2001. Its attributions call for it to license the development of various types of activities, including those for the functioning of education institutions of all types, from kindergartens to universities. Previously, only the Ministry of Education had the authority to accredit education institutions and to issue operating licenses.

In April 1977, all the rectors of the state and private higher education institutions became affiliated with a non-governmental organization called the Rectors' Council of the Republic of Moldova.

The Rector's Council is also a consultative body of the Ministry of Education. Its objective is the undertaking of activities designed to develop and to modernize the Moldavian universities and to promote co-operation with international bodies in the field of higher education.

At present, the Rectors' Council has twenty-four members – the Heads of private and state higher education institutions.

The President of the Rector's Council is elected for a two-year term. Currently, the function of president is being exercised by University Professor, Dr. Hab. Gheorghe Rusnac, Rector of the State University of Moldova.

The Rectors' Council focuses its attention on the most important problems – both current, and strategic – concerning the state and the development perspectives of higher education in Moldova. The Council conducts its activities during the eight to ten sessions it holds each year. During these sessions, issues related to the improvement of the instructional methods employed by the teaching staff in the state higher education system are debated.

The Rectors' Council debates and proposes solutions for the most difficult problems related to the development of the university system and adopts positions with regard to the diverse problems concerning the quality of the teaching and learning process in higher education institutions. Among the drafts of official documents that have been examined and approved by the Rectors' Council are the Framework-Plan for Higher Education and the strategic development plans of higher education institutions.

Some of the sessions of the Council are also attended by decision-makers from the Ministry of Education and by members of the Parliamentary Commission on Education.

At the request of the Ministry of Education, the Council makes recommendations with regard to the documents that regulate the operation of the education system, the activities of the teaching staff, student life, and the organization of admissions examinations and of the *licență* examinations.

The Rectors' Council acts mostly as an expert consultative body, as a generator of ideas that have materialized as a result of collective consultations, and as a promoter of initiatives meant to contribute to the thorough involvement of the university in the life of society. Thus, it launched an initiative to reform university research by having it interact with academic research.

Often, the Rectors' Council receives requests from governmental bodies that it make recommendations regarding decisions to be made as to projects in the field of higher education, the allocation of the annual draft budget, the line-item funding of education, the provision of expert opinions, projected legislation, and the drafting of official documents related to education.

A priority activity of the Rectors' Council is the promotion of co-operation and collaboration with higher education institutions abroad. In this area, a sustained effort is being made to conclude agreements for the mutual recognition of university diplomas.

The Rectors' Council of Moldova has established collaborative relations with the Rectors' Conference of Germany and the Council of Rectors of Romania.

The participation of the membership of the Rectors' Council of Moldova in the sessions organized by the Council of Rectors of Romania is becoming an authentic tradition. A common session was first organized in 1999.

Collaborative relations have been established with the Alexander Humboldt Foundation of Germany and the International Academy of Higher Education in Moscow.

The Rectors' Council promotes the collaboration of universities in Moldova with Western universities in the fields of science and education. It participates in the establishment of priorities in the framework of the Trans-European Programme for University Co-operation (TEMPUS-TACIS), and contributes to the participation of the universities of Moldova in the programmes and actions developed by the Francophone University Agency.

In their turn, college directors have organized an association called the College Directors' Council of the Republic of Moldova. Its attributions, that are similar to those of the Rector's Council, are undergoing the legalization procedure required by the Ministry of Justice.

4.3. THE ADMINISTRATION OF HIGHER EDUCATION – SYSTEM AND INSTITUTIONAL LEVELS

The Ministry of Education and the corresponding ministries that include the higher education institutions in their remit conduct the administration of higher education at system level.

The Ministries are responsible to the public for the quality of institutional administration with reference both to the institutional community and to the authorities invested with the functions of governance and strategic coordination of the development of higher education.

At institutional level, administration is the responsibility of the Administrative Council of the given higher education unit. It is subordinated to the Senate (or to the Teaching Staff Council, in the case of colleges). A university administrative council is composed of the rector, the vice-rectors, the deans, the chief accountant, and the director of the university library.

A college administrative council consists of the administrative director, the deputy directors, the department chiefs, the senior accountant, and the director of the college library.

The Administrative Council has the following competencies:

- It administers the available funds, including the funds allocated from the state budget, and ensures strict discipline with regard to finance and accounting.
- It secures its own income from research activities, study fees, design and consultation activities, production, and other such activities.
- It establishes the investment and property development needs of the given institution.
- It administers the institutional estate and its endowment, in the most profitable ways, in the interest of the academic community and with a view to developing the material basis of the higher education institution.
- It ensures the amelioration of the learning and living conditions of students.

4.4. INSTITUTIONAL AND STUDENT FINANCING

The main financial resource for the state higher education institutions consists of the budgeted funds. The level of funding is indexed to the rate of inflation in the country. The physical assets of these institutions constitute state property that is attributed to the respective higher education institutions along with the right of operational administration.

Higher education institutions also benefit from other financial resources including:

- funds obtained from such services rendered by staff instruction, in-service training and qualification courses, and from contract-based scientific research activities;
- income from the sales of items manufactured in the teaching process (in experimental workshops, etc.), and from the rental of buildings and equipment;
- income from tuition fees paid by tuition fee-paying students;
- funds earned through international co-operation and sponsorships.

The use of the budgeted funds allocated to higher education institutions and of the income from legal sources is regulated by the legislation in force. Each higher education institution may make independent use of its available funding, administer the balance, and open banking accounts, including accounts in hard currency.

At present, the higher education institutions in the Republic of Moldova are poorly financed. Despite the fact that a significant number of students (between 35 to 71 percent of the total numbers of state university students) pay rather high tuition fees (between 2,000 and 6,000 lei per year), universities are failing to invest in laboratory equipment, in the refurbishing of student residence halls and other buildings, and in the expansion of library collections.

With a view to stabilizing the economic situation of the higher education institutions and to ensuring the constitutional right of all citizens to education, the need to shift to the financing of education institutions according to their student enrollments, *i.e.*, the "the money follows the student principle" is being felt. Such a change would encourage students and their parents to select a university with great care. It would provide conditions for the stimulation of healthy competition among universities and would improve the quality of higher education.

Per-capita student financing norms would ensure the financing of instruction at the level of the state educational standards and should be established by law and adopted along with the budget law for the coming academic year (2003-2004).

Per-capita student financing would increase the possibilities for higher education institutions to attract extra-budgetary funding. It would also stimulate the development, in the field of education, of charity activities and the participation of enterprises in supporting higher education institutions.

Chapter 5

Faculty Structure and Academic Work

5.1. ACADEMIC STAFF: EMPLOYMENT AND PROMOTION

According to the 1995 Law on Education, the following teaching positions in higher education call for instructional and research activity: university professor, associate university professor, senior university lecturer, university lecturer, and teaching assistant.

Teaching positions are filled on a competitive basis. A panel, appointed each year by the rector of any university undergoing recruitment, is charged with organizing the competition. The positions of university professor and associate university professor are filled as a result of elections held within the senates of given higher education institutions. Each faculty council selects senior university lecturers and university lecturers for the given faculty.

Eligible candidates for the position of university professor should hold the title of professor in the relevant field or be the holder of a habilitated doctorate. Candidates should also have accumulated at least five years of experience in the position of associate university professor, or at least ten years of experience in research and have supervised one or two doctoral students.

As an exception to the above rule, persons holding a doctorate or an honorary title, with at least fifteen years of seniority in a teaching position, of which at least five years in the position of associate university professor, are also accepted as candidates.

Other candidates for the position of university professor can be persons with significant teaching, scientific, or artistic experience, who provide general and speciality courses, conduct staff training, have published scientific, teaching, and creative works, have authored higher education textbooks, and have developed at least one lecture course.

For the position of associate university professor, the following persons may compete: those holding the title of associate university professor and those holding a habilitated doctorate with at least two years of teaching experience or at least ten years of experience in research. Also, persons intensively involved in scientific, instructional, and creative activity, who have been teaching, at an advanced theoretical level, and who have been taking part in exhibitions, supervising the annual and diploma projects of students, and have published extensively in their fields of specialization, are permitted to compete for such positions.

The Chairperson of the recruitment committee invites each candidate for open positions of university professor and associate university professor to

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submit a report on his or her teaching and research activity over the last five years. The panel examines the credentials forwarded by the Chair and votes to recommend or not to recommend a candidate for the position in question to the Senate.

Persons failing to be recruited may take part in future recruitment competitions.

Successful candidates are appointed to their positions by order of the given Rector, as based on their written applications.

Participants in competitions for positions of senior university lecturer should hold an advanced degree and have accumulated at least three years of teaching experience or at least five years of experience in research. Holders of advanced degrees, with at least five years of experience in teaching, scientific, or creative activity may also participate in these competitions. Candidates who have accumulated scientific, methodological, and teaching publications, or, who are participants in art exhibitions, are also accepted.

For positions for university lecturers, persons with the following qualifications may apply to participate in the recruitment competitions:

- holders of advanced degrees;
- graduates having completed a teaching practicum and who have published in their fields of activity.

Elections for positions of senior lecturer and lecturer are the prerogative of the Faculty Council of the given institution.

Each university teaching assistant is appointed by order of the Rector, on the recommendation of the given department, for a three-year term. Priority in the filling of these positions is granted to persons who have been enrolled in postgraduate course programmes. Also, diploma holders with general average grades of at least eight points are also considered for such positions.

During their periods of employment, university teaching assistants will deliver four to six practical and laboratory lessons to members of their departments. At the end of a three-year period, each assistant will submit a report on his or her activities to the Chairperson who will decide whether or not he or she may continue his or her teaching activity.

The advanced degrees of Doctor of Sciences and of Habilitated Doctor are conferred by the specialized scientific councils of those higher education or research institutions qualified to do so and are validated by the Higher Attestation Commission established by decree of the President of the Republic of Moldova.

The teaching degrees of university professor and of associate university professor are conferred by the Presidium of the Higher Attestation Commission, based on the recommendations of the Senates of given higher education institutions and on approval by the Ministry of Education.

The granting of the honorary titles of "Professor *Emeritus*", "Doctor *honoris causa*", "Honorary Professor", "Honorary Member of the Senate" is, as a rule, the competency of the Senate of the given university.

5.2. TEACHING AND RESEARCH

The activity of a teaching staff member consists of teaching courses, of leading seminars, and of supervising practical and laboratory work. A full teaching load might also include the advising and guiding course and diploma projects, *licență* and diploma papers, doctoral theses, evaluation activities, and the supervision of activities involving sports and art.

Instructional, methodological, and organizational activities include the planning of the study process, the elaboration of new teaching methods, forms, and devices, the elaboration of teaching materials, the provision of student guidance in individual studies, the ensuring and the organization and methodology of student practicums, and other relevant activities.

In universities, course plans are approved by the University Senate and coordinated by the Ministry of Education. Course curricula are prepared by the chairs on the advice of the faculty councils, and are approved by the university senates.

The Supreme Council for Science and Technological Development, established in 2000 by a government decision, coordinates scientific research and technological development.

The teaching that takes place in higher education institutions is based on and linked to scientific research. Given this context, each teaching staff member has a basic responsibility to undertake research and to support science in the spirit of democratic values, moral precepts, academic freedom, and of support for the integration of the international scientific community and of the ideals of European culture and civilization.

According to the Law on the State Research Policy, research activities in higher education institutions can be developed on an individual basis, in research groups, by departments and chairs, in laboratories, and in subordinated research centers and institutions. Research activities may also include collaboration with education and research institutions at home and abroad.

Within any higher education institution, research activities are, as a rule, structured along three main axes:

- state financing for many basic and applied research themes;
- the development of courses, textbooks, monographs, problem compilation books, etc., intended to provide knowledge of national and international scientific achievements;
- initiation of students to research and stimulation of research activities under the guidance of the teaching staff. Research outcomes, in the form of speciality papers, are presented at annual student scientific sessions and/or integrated into diploma theses.

The University senates, faculty councils, and chairs are expected to analyze all scientific research activity and to take the necessary steps so that the results take their deserved place in the information society. Faculty and chair governance should stimulate student involvement and participation in research.

The personnel of the laboratories of the traditional universities: the State University of Moldova, the Technical University, the Agrarian University, and others are expected to engage in teaching and research so as to contribute to the training and education of students.

Table 32. Scientific and teaching staff in the Moldavian Soviet Socialist Republic (1980-1987)

(in whole numbers)

Staff	1980	1985	1987
Total number of staff numbers	8,731	9,776	9,550
Of which, in higher education institutions	4,311	4,547	4,877

Source: *Învățământul in RSS Moldovenească* [Education in the Moldavian SSR] (Chişinău, 1988), p. 4.

Scientific research is a major component of the activity developed by higher education institutions. Scientific activity in universities observes the Law on the State Policy and the Priority Directions in R&D, approved by Decision No. 1205 of 28 July 2000 of the Parliament of the Republic of Moldova.

The higher education institutions in the Republic of Moldova develop research projects:

- to fulfill requests by the State for such services (institutional themes financed from the State budget and scientific research themes selected on the basis of competition – also financed from the State budget);
- based on contracts with economic agents in the Republic of Moldova and abroad;
- financed by means of international grants;
- financed by the given Rector's Office (extra-budgetary).

Currently, a tendency exists in the Republic of Moldova to combine teaching and research tasks in universities.

Given the current economic circumstances of Moldova, both the higher education and the research institutions are facing many difficulties. Despite hardships, they are supporting the modernization of the systems of education and of R&D through the alignment of both to European and world standards.

The research activities of higher education institutions are focused on the following strategic objectives:

- accreditation and university autonomy;
- curricular reform, relating university specialities to the new State Classified List of Specialities, and the implementation of the European Credit Transfer System (ECTS);

- consolidation of the intellectual, logistical, and financial potentials of universities;
- development of the local and international impacts of universities;
- strengthening of the scientific basis of educational policy in the Republic of Moldova;
- ensuring that the reform of pre-university and university education is scientifically based;
- ensuring the sustainable economic development of Moldova.

The intellectual potential of higher education in Moldova, as represented by professors and students, has registered a series of achievements in terms of scientific research.

The new strategic orientation of the activities of Moldavian universities has led to curricular reform, the linking of the university training register to the demands of the New Classified List of Specialities, and the implementation of the European Credit Transfer System. The latter activity came as the result of a joint initiative of the State University of Moldova and of the Academy of Economics of Moldova.

In April 2000, with the assistance of the Soros Foundation, an international conference was held at the State University of Moldova. Experts from France, Hungary, the Netherlands, Sweden, the United States of America, and Romania debated the issues raised by the methodology of the European Credit Transfer System (ECTS).

At present, the European Credit Transfer System is undergoing experimental implementation in four faculties of the State University and at two other faculties of the Academy of Economics. The Technical University of Moldova and the University of Medicine are the next in line for implementation.

The European Credit Transfer System, that is being implemented in higher education in Moldova, offers both an analytical means to evaluate the time and effort required for the development of the teaching and learning system and advantages in regard to the organization and administration of the higher education system as a whole as well as the equivalence of earned credentials. The system represents an efficient means for the participation of the Moldavian system of higher education in European and international scientific programmes.

Scientific and methodological activities are being devoted to the development of the system of evaluation of school efficiency and of pre-university and university curricula.

The scientific activity of a university teaching staff member is evaluated according to the following criteria:

- the number of published books (monographs, university textbooks, thesauri, laboratory manuals) and courses taught;
- the number of research contracts and grants obtained;
- the number of papers presented at conferences and at symposia;
- the number of papers presented at meetings and at seminars;

- the number of papers published at home and abroad, in speciality reviews, annals, scientific bulletins, and conference proceedings;
- the number of articles prepared for the person's institution, faculty, etc.

As a rule, special attention is directed at research in the framework of student scientific associations, so as to link it to the process of instruction of future specialists.

Student research in faculties materializes in the form of papers presented at sessions of student scientific associations. These papers deal with professional themes and relate to the contents of the disciplines in which the *licenţa* is awarded and of diploma projects.

Doctoral studies combine learning and research at a very high level. Doctoral studies, available to *licenţă* graduates of long-duration university studies, conclude with a public thesis defense.

Since 1990, research has been severely set back by the economic difficulties that the country has faced. Nevertheless, through great efforts, the level of research activity in the institutions of the country is slowly returning to normal.

5.3. THE ROLE OF HIGHER EDUCATION IN THE NATIONAL RESEARCH SYSTEM

R&D is a national priority in Moldova. Currently, twenty-five institutes of the Academy of Sciences of Moldova, fifty-five branch research institutes, and nine state higher education institutions are developing R&D activities. In addition, R&D is being undertaken by certain private higher education institutions and by specialized R&D institutions. Over nine thousand persons are involved in activities related to R&D.

In Moldova, the strategic objectives of scientific research, the organization, promotion, principles, and mechanisms of R&D comply with the Law on the State Policy in R&D. The principal R&D objectives include the following:

- ensuring the sustainable development of the country, of its welfare, and of its quality of life;
- ensuring competitivity in terms of production and the creation of employment;
- ensuring the health of the population and raising the educational, intellectual, and spiritual level of society.

The State periodically determines the priority directions of research, which include the following fields:

- human resources (the natural and the human sciences, culture, education, and health care);
- advanced technologies in the agro-industrial complex and the assurance of auto-sufficiency;
- energetics;

- transition to a new economic system;
- new products and materials, advanced technologies;
- natural resources and environmental protection;
- information and communication technologies.

The R&D priorities for the 2000-2002 period were the following:

- basic research in the fields of the social and the human sciences;
- research in medicine, agriculture, and the environmental sciences;
- applied research in the production of new materials and the development of advanced technologies.

The national system of R&D organization and administration is a four-tiered hierarchical system.

Level 1 – The Parliament and the Government. At this level, laws and norms are established for the optimal development of the R&D system. The central public administration in this sphere is the Supreme Council for Science and Technological Development, a buffer governmental organization.

Level 2 – ministries and departments. At this level, proposals are made regarding priority directions and the re-organization of the institutions that coordinate the design and implementation of the State R&D programme.

Level 3 – State institutions (institutes of the Academy of Sciences of Moldova, ministerial research institutes, and universities).

Level 4 – non-governmental institutions (societies and scientific associations, academies, private higher education and research institutions).

In 1999, the Supreme Council for Science and Technological Development was set up and became an essential component of the R&D reform in the country.

The current programmes of the Council envisage the following:

- ensuring the consolidation and the development of scientific research activities in the country;
- the allocation of needed funds with a view to training new generations of researchers in university and Academy institutions and professionals for the new fields of the market economy;
- the development of new managerial capacities in scientific research;
- the identification of internal and external resources for the financing of research and, especially, the development of the ability to attract resources to research teams;
- the establishment of research centers offering advanced facilities.

The main funding resources for R&D are the following:

- state budgetary allocations determined annually;
- income from contract-based research, donations, sponsorships, etc.;
- extra-budgetary resources obtained from services provided for a fee.

Annually, 0.1-0.4 percent of the GNP is earmarked as R&D funds.

The reform of R&D that is currently underway in the Republic of Moldova is aimed at integrating R&D with higher education and at intensifying co-operation with non-university R&D institutes and higher education institutions. Its prerequisites are the priority State funding of the research programmes and the themes jointly conducted by the Academy research institutes and universities. The objectives are the improved quality of R&D activities and the training of highly qualified staff, the reproduction of the scientific teaching staff, the organization of university centers of excellence, chiefly oriented toward basic-research, and the transfer of technology to production.

Other joint activities involving teaching and research are the following:

- participation of the teaching staff in research activities developed by R&D institutes, with the parallel reduction of their teaching loads;
- the participation, for set periods, of researchers, in R&D institutes, in teaching activities, and as adjunct professors;
- the association of research teams employed by R&D institutes and of teams from higher education institutions which are engaged in research on similar themes;
- the setting up of teaching-scientific centers having a double subordination;
- the inclusion of researchers as members of university scientific councils and of university teaching staff members in the scientific councils of R&D institutes.

As a rule, 90 percent of the budgeted funds for scientific research are allocated to so-called institutional financing. The rest, 10 percent, is allocated to grant financing (earmarked allocations).

In 2001, eighty-seven projects in twenty-two research fields received grant financing. The projects were selected following a competition organized by the Supreme Council for Science and Technological Development. The total value of the grants obtained amounted to about 3 million MD lei (see Table 33). About 50 percent of the projects were distributed to the institutes of the Academy of Sciences, and the rest, to institutions of the Ministry of Education.

Table 33. Research project competitions in the Republic of Moldova (2001)

Institution	Projects launched	Financing obtained after the competition		
		Projects Accepted	Total (thou MD lei)	Percent
Academy of Sciences of Moldova	164	45	1,516	49.6
Ministry of Education	144	21	673	22.0
Ministry of Health	81	8	360	11.8
Ministry of Agriculture and Food Industry	70	6	265	8.7
Ministry of Economics	1	1	45	1.5
Ministry of Labour and Social Protection	2	2	45	1.5
Supreme Council for S&T Development	24	4	155	5.1
Total	486	87	3,059	100.0

Source: The Supreme Council for Science and Technological Development (Chişinău, 2001).

Allocations in the budget for 2000 for the institutional financing of scientific research amounted to 28,525,100 lei, including 8,606,000 lei for basic research (30.2 percent). Some 15,516,800 lei (54.4 percent) were allocated to applied research. The rest of the money, amounting to 4,402,300 lei (15.4 percent) was allocated to scientific staff training and to improving scientific processes.

About 45 percent of the total was allocated to the Science Academy of Moldova that was undertaking 164 funded projects having a total value of 12,889,000 lei. Next in line came the Ministry of Agriculture and the Food Industry, with 70 projects amounting to 5,476,800 lei (19.2 percent); the Ministry of Health, with 81 projects, 4,734,100 lei (16.6 percent); the Ministry of Education with 44 projects, 2,256,900 lei (7.9 percent); and other institutions with 127 projects, 3,168,300 lei (11.1 percent).

It is worth mentioning that, despite the fact that the competitive allocation of funds for R&D is only in its start-up phase, this form of financing is being further developed so as to contribute to the promotion of genuine scientific values.

An example worth examining is that of the research activity that was developed by the Technical University of Moldova (UTM), in 2000. It is the only higher education institution in Moldova that trains engineers for the national economy.

UTM has nine faculties and about 11,000 enrolled students. The teaching staff has 900 members, including 35 habilitated doctorate holders, 336 holders of first doctorates, 41 university professors, and 281 associate professors. By way of comparison, the University of Medicine and Pharmacy, with 3,400 enrolled students, employs 126 habilitated doctorate holders, 438 doctorate holders, 107 university professors, and 288 associate professors.

Research plays an important role in the activities of the teaching staff members at UTM. It is viewed as a means to heighten professional and scientific proficiency. Research activities are organized according to a Senate-approved annual programme. The Senate Council for Scientific Research is, as a rule, responsible for the development of research strategy and policy. The Council includes faculty representatives and is presided over by the vice-rector in charge of scientific research.

In 2001, UTM conducted forty-one budget-financed research projects, seventeen research projects financed by the Government of Romania, and nine international research projects. The Technical University is pursuing its own strategy for the development and consolidation of the research capacities of the chairs, the faculties, and other levels in the University. The strategy is based on the following principles:

- promotion of research in the university brought about by means of adequate salaries for doctoral students, differentiated salaries for the teaching staff based on performance in research, financial incentives for research teams, and the award of grants to students who have achieved excellent results in research;

- participation in international programmes: improvement of the information system and promotion of the scientific research programmes/projects sponsored by the European Commission and the international scientific community; support for research projects conducted in co-operation with European and American universities financed by the European Commission, NATO, or other international organizations; publication of research results in widely circulated languages; organization of scientific conferences with international participation;
- training of the higher education and research staff: selection of future doctoral students, their training in research activities as early as their second or third years of undergraduate studies; the possibility of doctoral programmes that are related to current developments in science and technology; implementation of coherent criteria and procedures in the evaluation of research and scientific performance;
- the modernization of the management of research by the setting up of the Technological Park of the Technical University, designed to make the best use of the peak research results of the University; involvement of the teaching staff in consultation and expertise activities, as well as in projects aimed at the restructuring and the technological retooling of the national economy, while attracting needed financial resources.

In 2001, the main outcomes of the scientific activity of the University led to the publication of 4 monographs, 617 scientific papers, and 19 invention patents. Over 800 students were involved in scientific research in different ways and were associated with 500 diploma papers and study projects involving scientific research. The most important results were displayed at diverse exhibitions and international salons (EURECA-2001, Geneva-2001, Infoinvent, INPEX (Pittsburgh), MoldEco-2001, Tehnopolis (Romania), Energetics and Constructions (Chişinău). Collectively, they won four gold medals, five silver medals, and two bronze medals.

Some 149 doctoral students are enrolled at UTM. A novelty of the system is the joint supervision of doctoral projects by professors from abroad and the defense of doctoral theses abroad. This form of activity, that is already in practice and involves the participation of professors from Romania and France, is to be legalized by the Higher Attestation Commission.

An initiative of the Technical University of Moldova that is designed to promote the transfer of technology is the integration of an industrial plant as a university sub-unit. This plant is being managed and financed autonomously. It is employing about forty persons in the area of production. It is intended to be the nucleus of a technological park.

The main sources of funding for research at the Technical University consist of budgeted allocations, contracts with enterprises, and international projects. In 2001, the financing of scientific research themes took place on a competitive basis for the first time. The Supreme Council organized the competition for Science and Technological Development in two sections, one for so-called institutional financing and the other for grant financing, the grants being offered directly by the Council. The Technical University benefited from the institutional financing of thirty-five research themes amounting to 486,900 MD lei, including 169,000 MD lei for basic research. Only six themes received grant financing amounting to a total of 230,000 MD lei. Some forty-one themes received 716.900 MD lei from the state budget, an increase of 57 percent as per the preceding year.

Research financing based on contracts with economic agents is still insignificant – only five themes in the amount of 39,400 MD lei. Difficulties exist with respect to the use of extra-budgetary resources. Often, the Ministry of Finance blocks such resources for indefinite periods of time.

As of 1991, the Government of Romania has been offering major support to scientific research in Moldova within the framework of the Moldova-Romania Co-operation Programme. It is through this programme that joint Moldavian-Romanian research teams have received funds for projects of common interest. In 2001, seventeen such projects were undertaken, worth a total of 165,000 MD lei, which is five times more than in 1999. Moreover, for the first time, the Government of Romania has launched four large projects aimed at setting up inter-regional centers in such fields as *(i)* Innovation and the Transfer of Technology; *(ii)* Welding in Keeping with European Community Standards; *(iii)* Railways; and *(iv)* Seismology. The Technical University is already involved in the first two projects.

Research financed from international grants for research and technical equipment has been thriving. In 2001, nine international projects were developed: seven CRDF[1] projects, one INCO-Copernicus[2] project, and one INTAS[3] project, the total valued at about 1 billion lei. The ratio of internationally financed projects to projects funded through the national budget is 6:1.

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[1] The United States Civilian Research and Development Foundation for the New Independent States (NIS) of the former Soviet Union (CRDF). More information available on http://www.crdf.org/.

[2] International Co-operation (INCO)-Copernicus – financing and management of joint research activities and joint activities — EU-funded research.

[3] An independent International Association (INTAS) formed by the European Community, European Union Member States, and like-minded countries acting to preserve and promote the valuable scientific potential of the NIS partner countries through East-West Scientific Co-operation. More information available on http://www.intas.be/.

Chapter 6

Students and Graduates

6.1. TRENDS IN STUDENT ENROLLMENTS

Over a span of two decades, 1970-1990, the Moldavian Soviet Socialist Republic witnessed a rapid increase in the numbers of students enrolled in higher education, figures surpassing those of secondary education. The phenomenon was similar to that of the Soviet Union as a whole in which the average of 50 percent was attained. Among students, the preferred fields were technology and engineering.

After 1990, the numbers of students admitted to the first year of studies in higher education decreased at a constant rate until 1993, the result of economic recession, which led to a reduction in the enrollment quotas established by the Government for state higher education institutions. During this period, there were no private higher education institutions.

Starting in 1993, a constant rising trend was registered with regard to the enrollment of first year students in the state higher education institutions, owing to the possibility of admission on the basis of the payment of tuition fees.

Another proportion of secondary school leavers was absorbed by the private higher education institutions which had, in the meantime, emerged, and the number of which was increasing in geometrical proportions. It should, however, be mentioned that, in general, the private higher education institutions are attractive to candidates who have failed to win admission to the state higher education institutions or are unsure of their chances of admission to the state higher education institutions in budget-financed places. The increase in private student numbers has also been favoured by the fact that, in private universities, admission examinations are mostly *pro forma*, for these institutions fail to comply with the requirements of the Ministry of Education.

Thus, during the 1999-2000 academic year, the total number of admitted students in the first year represented 25.1 percent of the age cohort.

Students may enroll in full-time, extramural, and evening course programmes. As a rule, extramural course programmes are one year longer than full-time day course programmes.

Along with the increased number of higher education institutions, from 24 in 1996, to 47 in 2001, the total number of students also increased over the same period, from 58,332 to 86,414, that is, by 48 percent.

Table 34. Student enrollment trends in the state and private higher education institutions in the Republic of Moldova (1990-2000)

Academic year	University (full-time)	University (all)
1990-1991	34,100	54,700
1991-1992	34,300	52,500
1992-1993	32,800	47,300
1993-1994	32,400	46,900
1994-1995	34,800	49,400
1995-1996	39,400	54,800
1996-1997	42,500	58,300
1997-1998	46,800	65,600
1998-1999	50,803	72,729
1999-2000	54,100	77,312

Source: The Ministry of Education (Chişinău, 2001).

Table 35. Higher education institutions and students in the Republic of Moldova (1996-2001)

	1996	1997	1998	1999	2000	2001
Total universities and other state and private institutions	24	28	38	43	47	47
Total students	58,332	65,595	72,729	77,312	79,082	86,414
Of which, tuition fee payers				40,436	48,339	59,343
Full-time courses	42,485	46,784	50,803	54,100	54,599	59,009
Of which, tuition fee payers				24,265	28,881	35,597
Extra-mural courses	15,810	18,881	21,926	23,212	24,470	27,405
Of which, tuition fee payers				16,171	19,445	23,746
Total number of students	31,969	36,089	39,998	43,316	44,504	49,509

Source: The Ministry of Education (Chişinău, 2002).

During the 1999-2001 period, the proportion of students enrolled under tuition fee contracts increased annually, representing 52.3 percent, 61.1 percent, and 68.7 percent, respectively, of the total number of students.

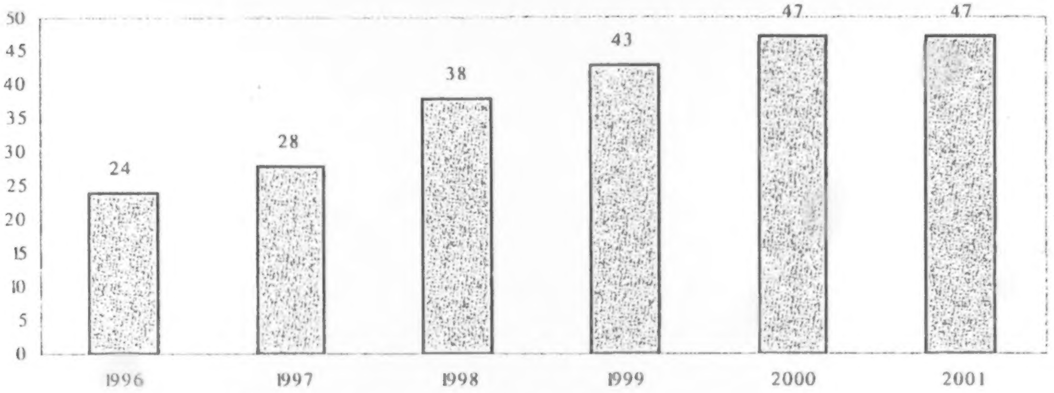
During the same period, the numbers of students enrolled in full-time courses increased from 42,485 in 1996, to 59,009 in 2001, that is, by 38.9 percent. With regard to extramural studies, the increase was from 15,810 to 27,405, that is, by 73 percent.

Also, the participation of women in higher education exceeded 50 percent of the total, ranging from 52 percent to 56 percent during the period.

The evolution of the total number of universities and of other higher education institutions, state and private, as portrayed in Figure 2, indicates that stabilization began in 2000, when additional restrictions on the authorization of new higher education institutions were imposed.

Figure 2. State and private higher education institutions in the Republic of Moldova (1996-2001)

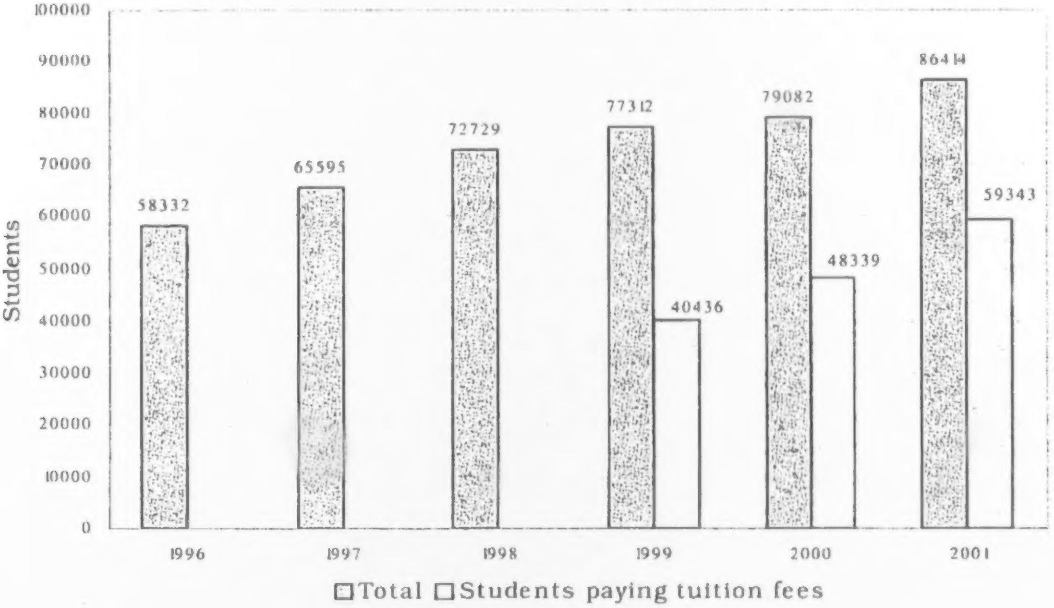
(in whole numbers)



Source: Department of Statistics and Sociology (Chişinău, 2002).

Figure 3. Student enrollments in state and private higher education institutions in the Republic of Moldova (1996-2001)

(in whole numbers)



Source: Mihai Paiu.

So far as the total first year student enrollment in higher education is concerned, it increased by 66.8 percent (from 14,826 in 1996, to 24,731 in 2001). The numbers of students attending full-time course programmes increased by 44.4 percent. The number of students pursuing extramural courses increased by 151 percent.

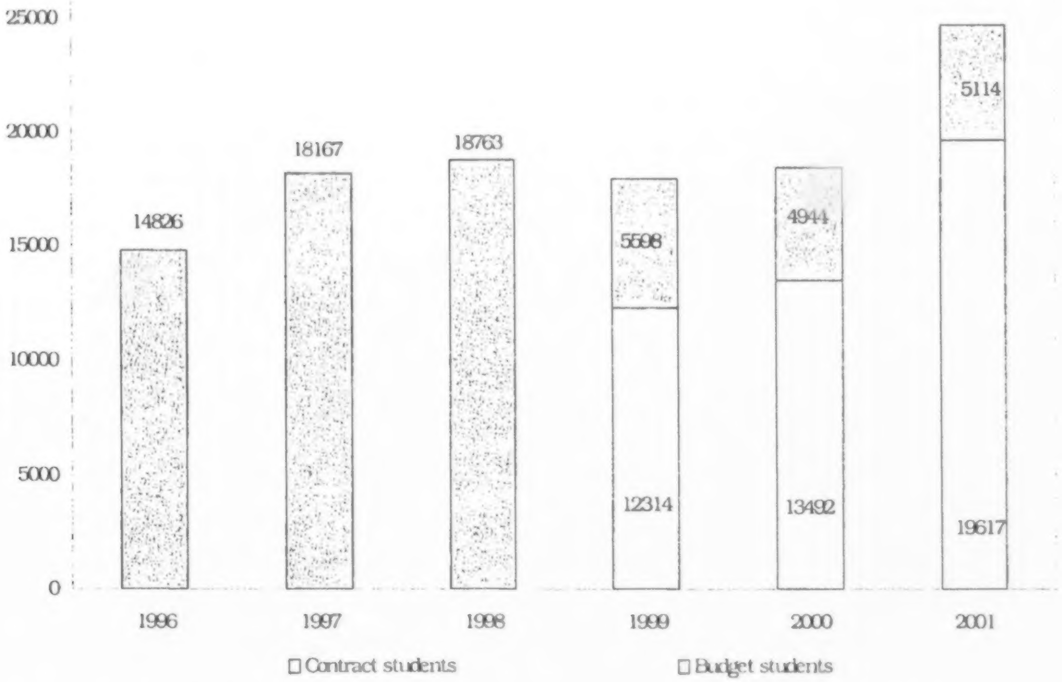
In 2001, the total number of students paying tuition fees admitted to the first year of studies in state universities represented 79.3 percent of the total, of which 72.4 percent were enrolled in full-time courses and the remainder, in extramural courses.

Also, the numbers of graduates of higher education institutions increased. Their total reached 6,985 in 1996 and 12,496 in 2001, representing a 78.9 percent increase. Of the total, during the 1999, 2000, and 2001 academic years, the percentage of graduates having been enrolled as tuition-fee paying students was 26.6 percent, 38 percent, and 46.1 percent, respectively. The numbers of graduates of full-time course programmes increased by 83 percent, and the number of graduates of extramural course programmes, by 72 percent.

During the above-cited period, the number of students enrolled in the first year, as compared to the number of graduates per year, was twice higher, which gives proof of the continuous increase in the numbers of persons pursuing higher education.

Figure 4. Students admitted to state higher education institutions in Moldova (1996-2001)

(in whole numbers)



Source: Mihai Paiu.

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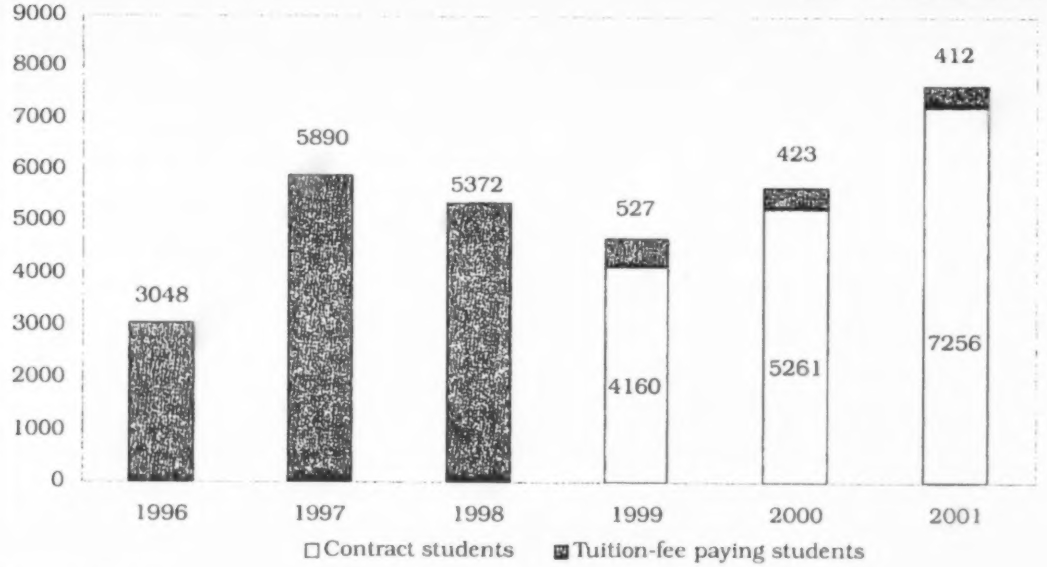
Figure 5. Tuition fee-paying students admitted to the state higher education institutions (extramural courses) in the Republic of Moldova (1996-2001)

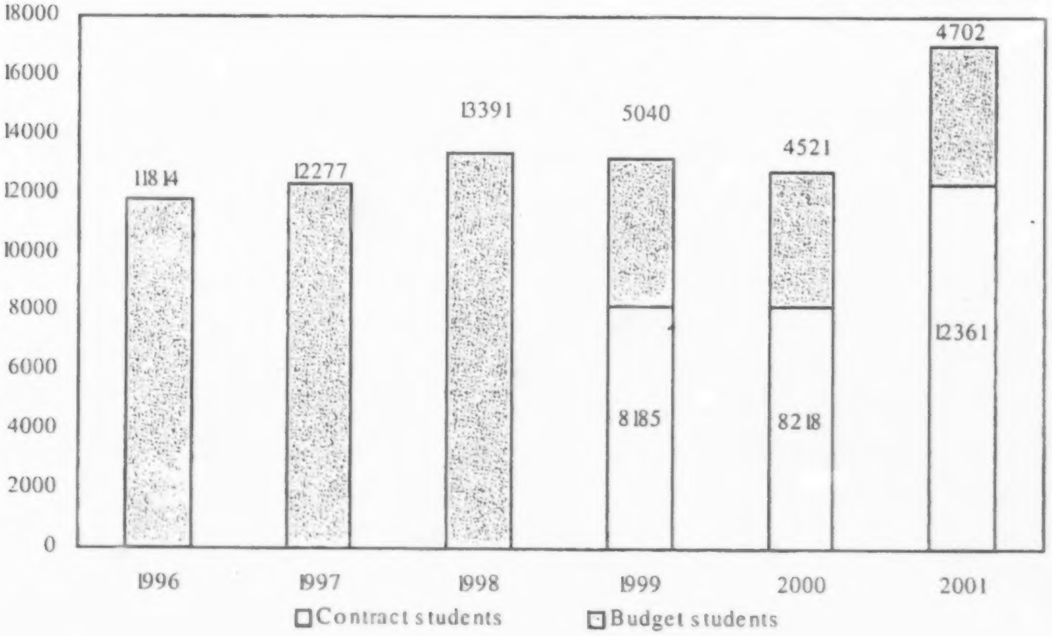
(in whole numbers)



Source: Mihai Paiu.

Figure 6. Students admitted to budgeted and to tuition fee-paying places (full-time course programmes)

(in whole numbers)



Source: Mihai Paiu.

In terms of ownership, higher education institutions in the Republic of Moldova are classified as public (state) institutions, private institutions, jointly owned institutions, foreign-owned institutions, or enterprise-owned institutions.

Most students, including those paying tuition fees, are pursuing studies in the public institutions: in 1998 - 81.4 percent; in 1999 - 78.2 percent; in 2000 – 75 percent; in 2001 - 73.5 percent.

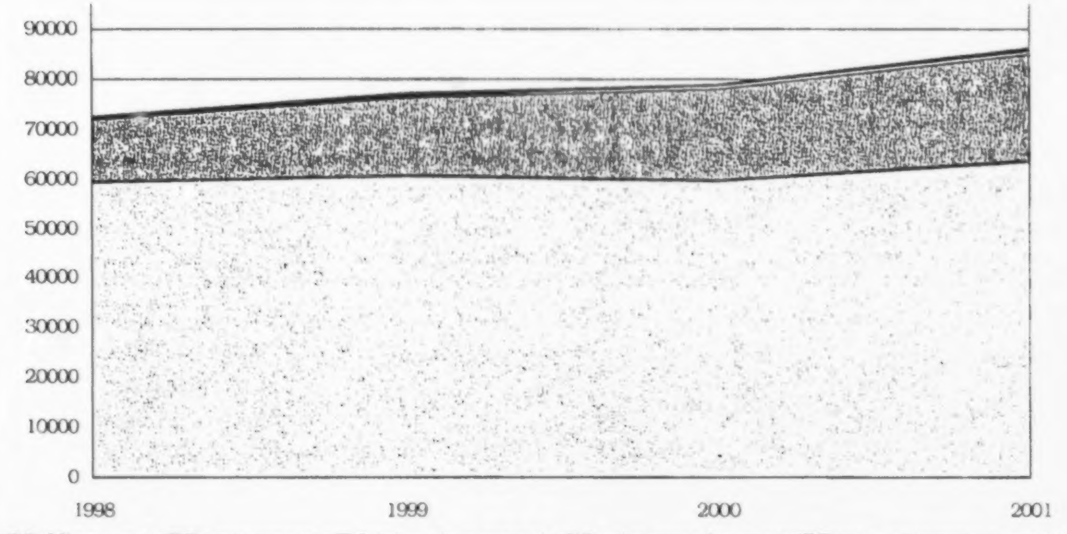
The quotas are diminishing as a result of the increasing power of absorption of the private institutions.

In 1998, 17.6 percent of the total number of students were enrolled in private institutions. In 2001, 24.6 percent of the total were so enrolled.

The number of students enrolled in foreign-owned institutions is insignificant and represents less than 1 percent.

In general, the proportional participation in higher education of young people belonging to the different ethnic groups (nationalities) of Moldova corresponds to the demographic structure of the young people in Moldova as a whole.

Figure 7. Student distribution by type of higher education institution proprietorship (in whole numbers)



Source: Mihai Paiu.

In higher education institutions, a declining trend of student numbers in the 17-year old cohort, from 12.8 percent in 1996 to 6.3 percent in 2001, has been detected. It seems to be the result of the increase in the numbers of students admitted to studies based on passing the baccalaureate examination. The vast majority of students (80-85 percent) fall into the age range of 17 to 23.

Table 36. Participation by nationality in higher education in the Republic of Moldova (1996-2001)

Nationality	1996	1997	1998	1999	2000	2001	Percent of the total
Total of which	58,332	65,595	72,729	77,312	79,082	86,414	100.0
Moldavians	44,129	47,297	52,316	54,667	56,029	61,392	71.0
Ukrainians	4,299	5,318	6,304	6,779	6,380	7,276	8.4
Russians	6,212	8,296	9,228	10,640	10,961	11,646	13.6
Gagauzans	1,900	2,291	2,623	2,692	3,072	3,245	3.6
Bulgarians	1,237	1,411	1,584	1,729	1,820	1,831	2.2
Jews	178	287	201	209	235	264	0.3
Other	377	695	473	596	575	760	0.9

Source: Department of Statistics and Sociology (Chişinău, 2001).

Although the cohort that is twenty-four year old and over seems to have increased only slightly in terms of numbers, the percentage that it represents is steadily rising.

Table 37. Age distribution of students in higher education in the Republic of Moldova (1996-2001)

Age cohort	1996	1997	1998	1999	2000	2001
Total	58,332	65,595	72,729	77,312	79,082	86,414
Up to 17-year olds	7,369	7471	7479	7499	6218	5510
17 and 18-year olds	9,149	10,278	10,638	10,880	10,644	12,769
19-year olds	8,722	9,954	10,743	11,556	11,884	12,565
20-year olds	8,161	9,318	9,928	11,417	12,431	13,131
21-year olds	7,535	8,213	8,289	10,002	10,977	11,538
22-year olds	5,266	6,362	6,880	7,272	7,203	8,063
23-year olds	3,582	3,859	4,189	4,384	4,497	5,738
24-year olds	2,497	3,065	3,283	3,433	3,518	3,983
25-year olds			2,423	2,379	2,476	2,627
26-year olds			1,821	1,875	2,044	2,091
27-year olds			1,209	1,543	1,730	1,720
28-year olds			1,189	1,202	1,316	1,402
29-year olds	3,400	3,799	1,174	927	889	1,218
30 to 34-year olds	1,526	1,894	1,582	1,393	1,660	2,095
35 to 39-year olds	793	887	894	988	986	1,204
40-year olds and over	332	495	346	562	609	760

Source: Department of Statistics and Sociology (Chişinău, 2001).

6.2. STUDENT SOCIAL BACKGROUNDS

The State financial support granted to students in higher education institutions takes the form of scholarships and other types of assistance. An effort is being made to ensure as broad an access to higher education as possible.

The students enrolled in budget-financed places in higher education institutions benefit from the following types of state scholarships:

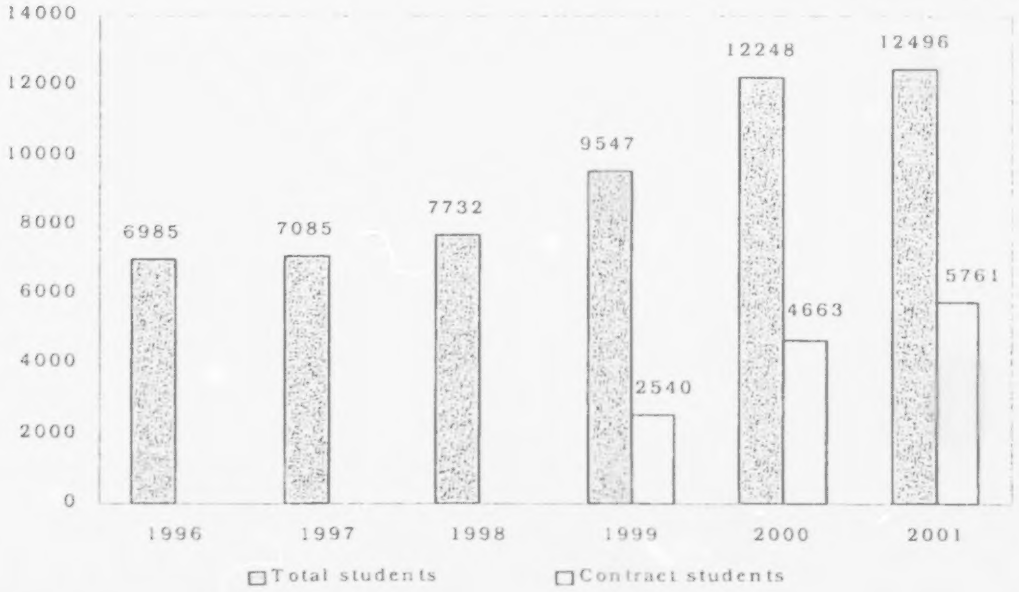
- monthly merit grants awarded on the basis of academic performance to 40 percent of the budgetary students;
- monthly social grants to students coming from families of modest means who have not been granted scholarships;
- nominal scholarships (based on excellence) granted each semester to sixty-five students who have achieved remarkable study results; these include ten "Republican Scholarships", fifteen "Government Scholarships", and forty "*Gaudeamus* scholarships".

Allocations to the state scholarship funds reflect the fluctuations in student numbers.

In addition to state scholarships, students may also be awarded scholarships by enterprises of one kind or another that assist them, fully or partially, in paying the required tuition fees and maintenance costs. The donor establishes the criteria according to which such scholarships are granted.

Figure 8. Graduates of the state higher education institutions in Moldova (1996-2001)

(in whole numbers)



Source: Department of Statistics and Sociology (Chişinău, 2002).

Students also benefit from free medical assistance, reduced residence hall fees, and special low fares for urban and long-distance transportation. In 1996, the number of students residing in residence halls represented 66.3 percent of the total. In 2001, they represented 67.6 percent.

To increase opportunities for access to higher education on the part of young persons from rural environments and from families of modest means, the Parliament passed a Law on the Granting of Preferential Study Loans. However, this Law has not yet been implemented because the banks refuse to offer credits in the absence of sound reimbursement guarantees.

During the 1996-2001 period, the total student enrollment in private and state higher education expanded from 58,332 to 86,414, that is, by 48 percent. At the same time, the numbers of budgetary students decreased to 27,071, representing only 31 percent of the total student numbers.

Table 38. Social background of students in higher education in the Moldavian Soviet Socialist Republic (1987)

(in percentages)

	Moldavian Soviet Socialist Republic	USSR average 1985/86
Workers	35.6	41.0
Peasants (collective farmers)	25.3	9.0
Civil Servants	39.1	50.0

Source: Invăţămîntul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 47.

Table 39. Students enrolled in higher education institutions (full-time courses), beneficiaries of state scholarships, in the Moldavian Soviet Socialist Republic (1970-1988)

Year	1970-1971	1980-1981	1985-1986	1987-1988
Student numbers	18,839	23,585	23,778	22,939
Percent of the total	76	75	76	75

Source: Invăţămîntul in RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 64.

Table 40. Full-time students housed in student residence-halls in the Moldavian Soviet Socialist Republic between 1970-1988

(in whole numbers)

Year	1970/71	1980/81	1985/86	1987/88
Student numbers	12,502	16,795	18,020	17,888
Percent of the total	50	53	58	59

Source: Invăţămîntul in RSS Moldovenească [Education in the Moldavian SSR (Chişinău, 1988), p. 65.

Table 41. Full-time Moldavian students housed in student residence halls (1996-2001)

(in whole numbers)

Students	1996	1997	1998	1999	2000	2001
Total	58,332	65,595	72,729	77,312	79,082	86,414
Of which, without lodging	27,256	20,974	26,762	23,566	20,064	21,766
With lodging	18,069	10,060	17,403	14,085	14,162	14,709

Source: Department of Statistics and Sociology (Chişinău, 2002).

Over the last six or so years, the numbers of scholarship recipients decreased from 21,042 to 9,627, that is, by 54 percent. The quota of those having benefited from study grants decreased from 36 percent in 1996 to 11 percent.

From among the students receiving study grants, the tuition fee-paying students represented 36.7 percent, and the budgetary students, 46.7 percent.

Table 42. Full-time students in higher education institutions in Moldova beneficiaries of state scholarship (1996 and 2001)

(in whole numbers)

	1996	1997	1998	1999	2000	2001
Total students	58,332	65,595	72,729	77,312	79,082	86,414
Total recipients	21,042	22,182	18,588	8,576	9,174	9,627
-under contract	1,392	1,128	1,953	1,097	633	512
-state scholarships	19,536	21,054	16,635	7,479	8,541	9,115
-ministry grants	114	0	0	0	0	

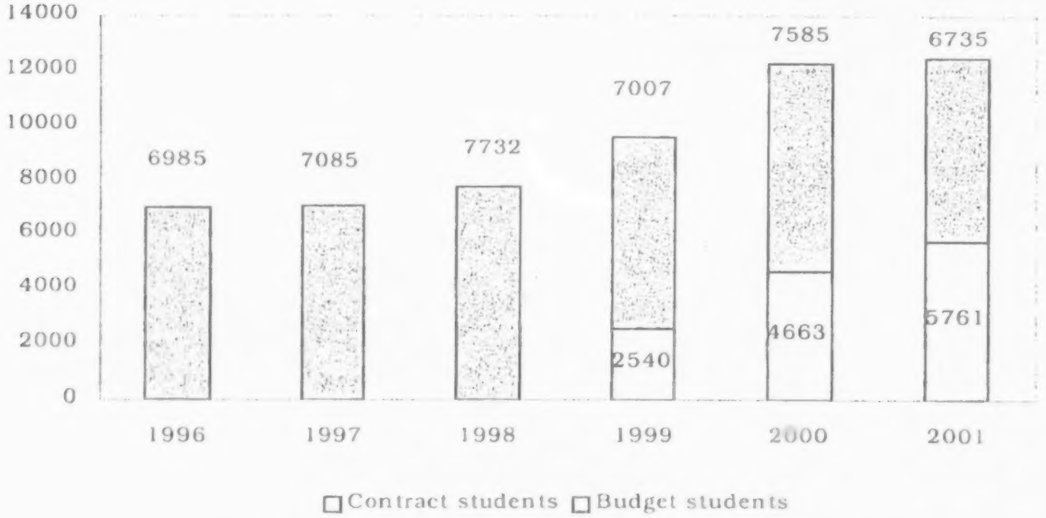
Source: Department of Statistics and Sociology (Chişinău, 2002).

6.3. TRENDS IN NUMBERS OF GRADUATES

In the Republic of Moldova, the total numbers of higher education graduates is generally on the rise. If, in 1996, their numbers represented 6,985 (12 percent of the total student numbers), in 2001, the figure had increased to 12,496 (14.5 percent), that is, a global increase of 78.9 percent. The development in the period mentioned is portrayed in Figure 9 below.

Figure 9. Graduates of the public higher education institutions (full-time course programmes) in the Republic of Moldova (1996-2001)

(in whole numbers)



Also, the dynamics of the numbers of graduates from higher education in full-time and in extramural course programmes was on the rise during the period.

Figure 10. Graduates (full-time course programmes, budgetary and contract students) of the state higher education institutions in the Republic of Moldova (1996-2001)

(in whole numbers)

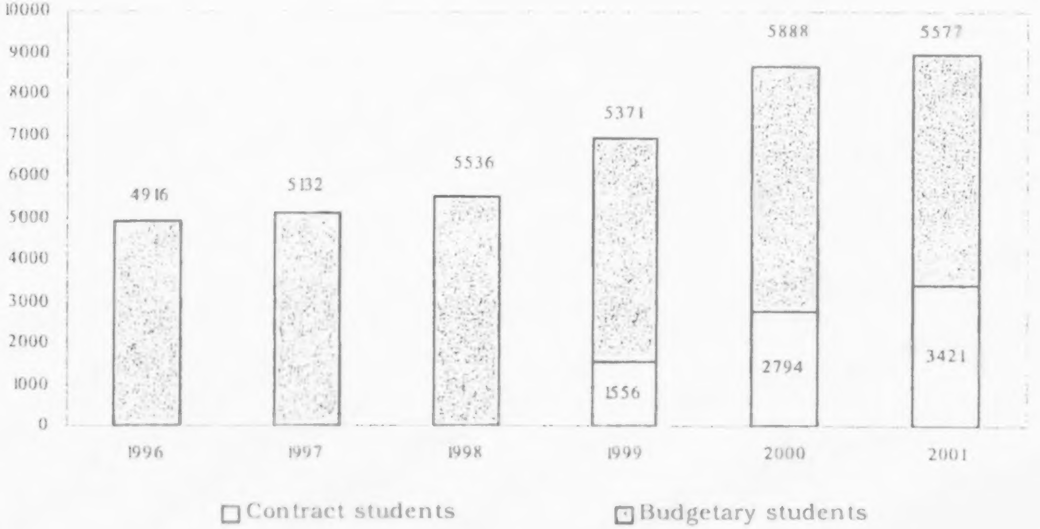
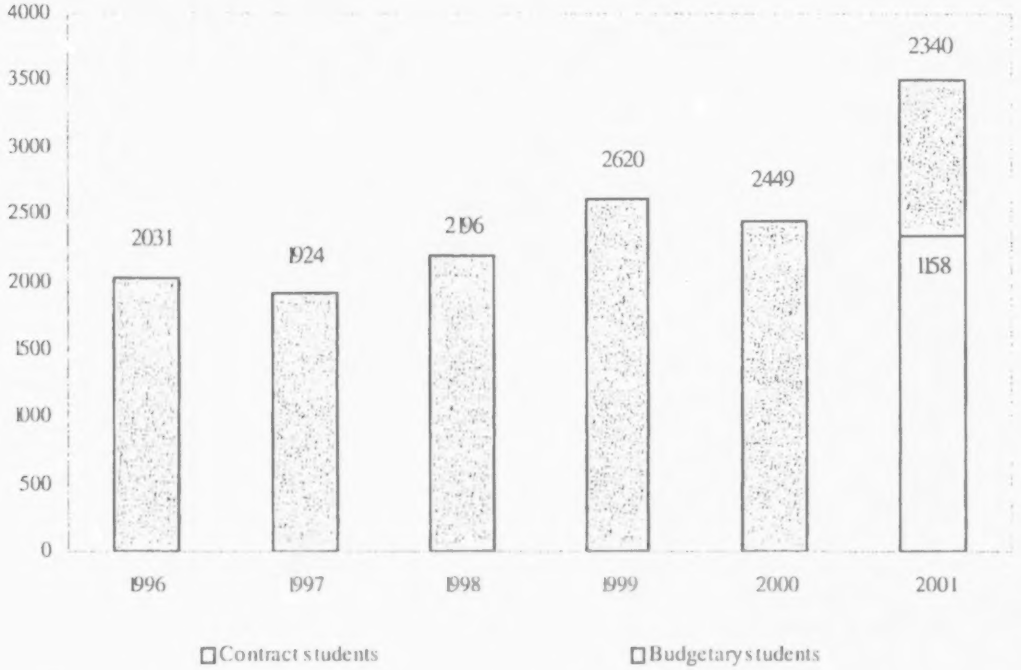


Figure 11. Graduates of the state higher education institutions (extramural course programmes) in the Republic of Moldova (1996-2001)



The distribution of students according to branch of industry is a reflection of the policy regarding the education of highly qualified specialists for the national economy.

Against the general background, over recent years, of increased student numbers, a considerable decrease in student enrollments in certain specialities required by certain branches of the national economy has been observed. This development can be explained both by the permanent decline registered by these sectors of the economy and by the lack of a distinct and substantial policy on staff training.

Thus, during the 1996-2001 period, the numbers of students in industrial specialities increased from 8,952 to 11,305 (by 26 percent), while admissions increased by 38.7 percent, and the number of graduates by 33.5 percent. The proportion of students training in these areas registered a slight decrease, from 15.3 percent of the total numbers, in 1996, to 13 percent in 2001.

The numbers of students enrolled in agricultural specialities also decreased during the period (by 11 percent), even though admissions figures have remained at the same level and the exit figure was reduced by 23.8 percent. It is important to mention that, although Moldova has a preponderantly agricultural economy, the percentage of students trained in this field, in 1996, represented 9.5 percent of the total student numbers, and in 2001, only 5.7 percent.

The fields of the economic sciences also registered changes in their rates of employment over this period. While the student quota was 14.9 percent in 1996 and 13.5 percent in 2001, the general increase in student enrollments reached 33.8 percent. In the same period, the numbers of admissions increased by 78 percent, and the numbers of graduations, by over 200 percent.

The same trend as above is observed in the fields of law. While the quota of students enrolled in the field increased from 4.8 percent to 9.3 percent, total student numbers increased by 187 percent. If admission numbers increased by 106.5 percent, the numbers of graduates increased even more, by 607 percent (the percentages represented by law school graduates increased from 1.3 percent of the total numbers of graduates in 1996 to 5 percent in 2001). This disproportionate increase is explained both by the excessive numbers of applicants, most of whom must pay tuition fees, and by the absence of a viable link to the labour market. Bearing in mind the continuing increases of enrollments in this field and the overcrowding of the labour market in this speciality, the issue of finding employment is becoming very serious.

A significant reduction, by 34.8 percent, of the total student enrollment in medicine has been noted (from 7 percent to 3 percent). While the admission numbers have been maintained at the same level, the numbers of graduates had decreased in 2001 by 43.8 percent as compared to the figure for 1996 (13.6 percent in 1996 and 4.3 percent in 2001).

With regard to the educational specialities, the total student enrollment increased from 19,338 to 28,666 (48.2 percent), their 1996 and 2001 quotas representing 33.1 percent and 33.2 percent, respectively.

During the 1996–2001 period, student enrollments in a series of specialities, such as Mathematics, Physics, Chemistry, Geography, Sociology, Library Sciences, Physical Education and Sports, Arts, Transportation, Technology of the Food Industry, and Ecology remained constant, nevertheless, decreasing in terms of the general tendency.

In the case of another series of specialities, decreases in student enrollments have been recorded. These include: Biology (by 34 percent), History (by 27.6 percent), Philosophy (by 56 percent), Pedagogy (by 54.6 percent), Music (by 26 percent), Medicine (by 28.4 percent), Electrotechnics and Energetics (by 28 percent), and Mechanics (by 41.6 percent). Both the state of the labour market and social decline have given rise to this phenomenon.

At the same time, certain specialities are still in high demand, even in the absence of budgetary funding. A considerable increase in student numbers has characterized Law (by 150.9 percent), Administration (by 165 percent), Philology, especially foreign languages (by 31 percent), Psychology (by 177 percent), Economics (by 51 percent), Computer Sciences (by 1,340 percent), Engineering (by 239 percent), Information Systems and Computers (by 616 percent), and Services (by 184 percent).

6.4. THE TRANSITION TO EMPLOYMENT

In the Republic of Moldova, as in all the countries in the former Soviet space, an effort is being made to synchronize supply and demand on the labour market.

The former regime permitted the planning of labour intake within the successive five-year plans of economic development. Owing to the excessive development of all the branches of the economy, society permanently faced an acute lack of highly educated specialists.

The Republic of Moldova retained the older mechanism that had been used in designing admission plans (based on school enrollment figures) and for approving the list of ranked specialities. The mechanism consists in generalizing the data provided by the universities and their publication in the form of a Government decision that pays little need to the economic needs of the country. As a result, the higher education system is not linked to the labour market, and universities adjust themselves to the delivery of "prestige" specialities.

For example, the ranking by speciality of the graduates of higher education in the cohort for 2000 is the following: law – 25 percent; economics – 22 percent; foreign languages – 10 percent; other specialities – 43 percent. As a consequence, only one graduate out of eight was able to find employment. It is therefore obvious that there is great need to establish direct links between the higher education system and the labour market.

Although attempts are still being made to assign jobs in the schools to the graduates of the state higher education institutions, the percentage of employment possibilities that this system represents is very low and in decline owing to the scarcity of employment possibilities in the state sector and to low salaries, the payment of which is always in arrears. Of the 6,985 graduates in 1996, only 1,249 were centrally distributed to workplaces, that is 17.9 percent (in 1997 – 13.1 percent; in 1998 - 13 percent; in 1999 - 11 percent; in 2000 – 10.3 percent; and in 2001 – 10.6 percent).

Although the Ministry of Education assigned 1,979 young specialists to schools, only 671 accepted their assignments, that is, about 34 percent. During the 1998-1999 school year, the number of employed schoolteachers, 3,318, was insufficient.

The reasons for which graduates fail to accept their job assignments are the low salaries and the delays in their payment, the lack of housing facilities, and the denial of other legal benefits to which they are entitled.

The lack of teachers, particularly in rural schools, is the cause of an alarming phenomenon: schools in which classes cannot be held, a situation that is seriously affecting the quality of education throughout the country.

Table 43. Classification by profile of higher education specialists employed in the national economy in the Moldavian Soviet Socialist Republic in 1941 and 1957

(in figures and percentages of the total)

Profile	1 Jan 1941		1 Dec 1957	
	(Thou.)	(%)	(Thou.)	(%)
Engineers	0.8	14.7	2.9	12.2
Agronomists, veterinary technicians, veterinary doctors, and forestry specialists	0.6	10.1	2.7	11.7
Doctors (excepting dentists)	1.0	18.5	3.3	14.0
Primary and secondary school teachers and university graduates (excepting legal counselors, doctors, and economists), specialists in library sciences and culture	1.7	31.5	12.0	50.9
Other profiles	1.3	25.2	2.6	11.2
Total	5.4	100	23.5	100

Source: *The National Economy of the Moldavian Soviet Socialist Republic. Statistics Yearbook* [in Russian] (Chişinău, 1959), p. 166.

Table 44. Numbers of higher education graduates in the Moldavian Soviet Socialist Republic (1959, 1970, 1979, and 1987)

Graduates	1959	1970	1979	1987
Total (thou.)	30	83	169	
Per 1,000 inhabitants (aged 10 or more)	14	29	52	67

Source: Invăţământul în RSS Moldovenească [Education in the Moldavian SSR] (Chişinău, 1988), p. 3.

Table 45. Registered unemployed in the Republic of Moldova by age and educational level (1997-2001)

(in figures)

Unemployed	1997	1998	1999	2000	2001
Total registered unemployed	49,518	63,296	57,834	50,848	59,505
16-24 year olds	17,440	20,344	16,593	16,627	17,689
25-29 year olds	5,988	7,822	6,971	6,717	10,067
30-44 year olds	17,469	24,601	23,296	18,692	22,647
University graduates	4,146	4,339	5,201	3,712	4,311
Of whom, women					2,401
Speciality short- and medium-term university studies	7,597	8,616	9,153	6,856	7,039
Of whom, women					4,266

Source: *Republica Moldova în cifre* [The Republic of Moldova in Figures] (Chişinău, 2002), p. 43.

Chapter 7

The Future of Higher Education in Moldova

The current trends in the development of the national economy of Moldova and the process of synchronizing the national system of education with European norms are signs that, in the years to come, Moldavian higher education will be dealing with the following important issues:

- the ensuring of equal opportunities for access to higher education for all categories of the population;
- the development and strengthening of university autonomy;
- the steering of higher education toward the development of those competencies required by the new challenges of the labour market and of the national economy;
- the ensuring of the unbiased development of both the state and the private higher education systems.

The priorities in the field of lifelong education are the following:

- ensuring the right to lifelong education for all categories of the population, including the organization of open and distance education;
- improving the quality of education by the implementation of new educational standards, curricula, and teaching methods, and of new evaluation and certification technologies;
- integration of the new information and communication technologies into higher education;
- the design and implementation of new mechanisms and channels for the financing of higher education, according to current and future perspectives.

For these issues to be approached, the legislation and norms in force need to be revised so as to make the restructuring of higher education possible.

Higher education institutions will play a more significant role in the identification of the needs of the national economy, in the transfer of technological advances to the economy, and in the implementation of new technologies in industry and agriculture.

Higher education institutions should consolidate and make more efficient use of their autonomy, especially of their financial autonomy. They have to instruct a new generation of managers capable of utilizing the opportunities provided by university autonomy, especially in view of an innovative administration of state-provided and external funding.

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Another important responsibility is the promotion of equality of access to higher education. With this view in mind, the system of higher education needs to take the following three steps:

i. It should prevent any increase in the existing inequities arising from current funding methods and study programmes. Special study grants should be made available to disadvantaged students as incentives for them to participate in higher education and to achieve academic success.

ii. Free tuition is the most important form of student support. Higher education institutions can change the decisive factor in financial support that currently is based purely on academic merit, and, instead, select students on the basis of need. It is inefficient and inequitable for students from well-to-do families to be granted unneeded subsidies, while needy students find access to higher education difficult, because the currently available subsidies are insufficient to satisfy their needs.

iii. Higher education should increase co-operation with secondary education in order to better assist students from poor families. Such university-school partnerships would be equally beneficial to the universities and to the schools.

Maintaining an equilibrium between the public and private sectors of higher education involves not only student numbers but also creates the conditions for both sectors to co-operate and to function efficiently.

The scarcity of funds and the current staff salary system fail to offer educators the needed incentives to improve the ways in which they work.

The quality and relevance of graduates is yet to become a final goal of the higher education system in the Republic of Moldova. Students require adequate instruction so as to be able to respond to new employment challenges. It is necessary for the higher education institutions to focus increasingly on relevance and internal competition and thus attract the necessary budgetary funding.

For the current reform of higher education in Moldavia to be compatible with European trends in higher education, it should progress along the following lines:

- Universities should provide equal opportunities for all students and educate responsible individuals as citizens of a democratic society.
- Intercultural perspectives in the system of education, as provided for by Council of Europe and European Commission programmes, must be implemented. The University must address all people, irrespective of ethnic, social, or economic origin, and assist them in learning to live in a climate of tolerance and understanding.
- The implementation of the Information and Communication Technologies in higher education must be supported and actions aimed at the efficient use of these new technologies must be promoted.

- The trend of decentralization and of wide university autonomy must be pursued, and inter-university partnerships must be promoted, including partnerships with the State authorities and with civil society.
- Education based on long-term contracts linking higher education institutions with enterprises and other organizations must be pursued.
- The functions of the Ministry of Education must be redefined in ways that direct its activities toward the development of standards and procedures for the evaluation of the quality of higher education and the transparent certification of higher education institutions, with the wide participation of unions and the non-governmental organizations of civil society.

Appendices

1. HIGHER EDUCATION INSTITUTIONS SUBORDINATED TO THE MINISTRY OF EDUCATION OF THE REPUBLIC OF MOLDOVA

MOLDOVA STATE UNIVERSITY
Address: Str. Mateevici 60, MD-2009 Chişinău
Telephone: +373-2-544-400 and +373-2-577-401
Fax: +373-2-240-655
E-mail: stahi@usm.md
Internet: http://www.usm.md
Rector: Gheoghe Rusnac

TECHNICAL UNIVERSITY OF MOLDOVA
Address: Bd. Ştefan cel Mare 168, MD-2012 Chişinău
Telephone: +373-2-210-447 and +373-2-249-205
Fax: +373-2-249-028
E-mail: amariei@mail.utm.md
Rector: Dr. S. Ion Bostan

ION CREANGĂ STATE PEDAGOGICAL UNIVERSITY
Address: Str. Ion Creangă 1, MD-2069 Chişinău
Telephone: +373-2-749-914 and +373-2-743-336
Rector: Ion Guţu

TIRASPOL STATE UNIVERSITY
Address: Str. Iablociking 5, MD-2069 Chişinău
Telephone: +373-2-754-924 and +373-2-754-942
Fax: +373-2-240-655
E-mail: stahi@usm.md
Internet: http://www.usm.md
Rector: Mitrofan Cioban

MOLDOVA ACADEMY OF ECONOMICS
Address: Str. Mitropolit G. Bănulescu-Bodoni 61, MD-2005 Chişinău
Telephone: +373-2-224-128 and +373-2-224-216
Rector: Grigore Belostecinic

NATIONAL INSTITUTE FOR PHYSICAL EDUCATION AND SPORTS
Address: Str. A. Doga 24/1, MD-2024 Chişinău
Telephone: +373-2-494-182 and +373-2-494-122
Rector: Veaceslav Manolache

ALECU RUSSO STATE UNIVERSITY AT BĂLȚI
Address: Str. Puşkin 38, MD-3121 Bălți
Telephone: +373-231-23066 and +373-231-23570
Rector: Nicolae Filip

CAHUL STATE UNIVERSITY
Address: Piața Independenței 1, MD Cahul
Telephone: +373-239-22482 and +373-239-22481
Rector: Ion Siscanu

COMRAT STATE UNIVERSITY
Address: Str. Galațan 17, MD-3800 Comrat
Telephone: +373-238-24345 and +373-238-24091
Rector: Stepan Varban

2. STATISTICAL APPENDICES: EXPENDITURES FOR EDUCATION

Table 1. Total expenditure and total public expenditure for education (1994-2000)
(in millions MD lei

	1994	1995	1996	1997	1998	1999	2000
Expenditure for public education	414.3	567.0	789.9	888.8	641.2	575.9	718.5
Total expenditure on education[1]	414.3	567.0	789.9	935.5	708.5	680.1	846.1
Consumer price index	2173	2822	3485	3895	4195	5844	
Consolidated public expenditure (CPE)		2927.1	3546.2	4340.8	3985.1	4535.1	
GDP	4,737	6,480	7,798	8,917	9,122	12,204	15,980
Expenditure for public education in 1994 prices[2]	414.3	436.5	492.5	496.0	332.1	214.2	
Total expenditure for education (% of GDP)	8.7	8.8	10.1	10.5	7.8	5.6	5.3
Expenditure for public education (% of GDP)[3]	8.7	8.8	10.1	10.0	7.0	4.7	4.5
Expenditure for public education (% of TPE)		19.4	22.3	20.5	16.1	12.7	

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

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[1] Public education expenditure + Extra-budgetary resources of educational institutions

[2] Using CPI as a deflator

[3] Excluding Transnistria

Table 2. Extra-budgetary funds by level of education and type of education institution (1997-2000)

(as percentages of total resources)

Type of institution	1997	1998	1999	2000
Central administration	0	0	0	0
Preschool institutions	0	0	0	0
Primary schools	0	0	0	0
General secondary schools	0	0	0	0.1
Secondary boarding schools	0.8	1.4	2.4	1.7
Boarding schools for the handicapped	1.1	1.0	2.2	1.5
Polyvalent vocational schools	7.5	7.6	12.0	13.8
Professional schools	4.1	11.4	14.3	15.4
Colleges	14.6	22.1	37.4	41.1
Universities	30.5	48.5	65.4	68.0
Extra-curricular institutions	1.1	2.5	2.5	1.0
Others	1.6	1.5	5.9	6.7
Total	5.0	9.5	15.3	15.1

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 3. Enrollments in private education institutions in 1998

Institutions	Institutions		Enrollments	
	Numbers	Percent	Numbers	Percent
Preschool units	238	17.3	14,389	11.4
General secondary schools	18	1.2	2,716	0.4
Secondary polyvalent vocational schools	6	6.9	141	0.4
Colleges	11	19.6	3,817	12.9
Universities	25	65.8	13,494	18.6

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 4a. Salary trends by type of education institution

(in MD lei and percentages)

Average salary, monthly estimates, contributions excluded	Year	TOTAL			Pre-school		Primary		Secondary general		Secondary boarding	
		Salary	Salary/ GDP *per capita*	Salary (1997 prices)	Salary	Salary/ GDP *per capita*	Salary	Salary/ GDP *per capita*	Salary	Salary/ GDP *per capita*	Salary	Salary/ GDP *per capita*
Teachers	1997	233.3	1.15	233.3			189.7	0.93	222.0	1.09	261.5	1.28
	1998	206.8	0.99	192.0			184.3	0.88	207.7	1.00	218.2	1.05
	1999	206.5	0.73	137.7			172.7	0.61	204.4	0.73	234.5	0.83
	2000	271.4	0.74	152.8			242.3	0.66	278.0	0.76	308.8	0.84
Other staff	1997	139.3	0.68	139.3	128.5	0.63	114.2	0.56	147.5	0.72	149.7	0.74
	1998	127.5	0.61	118.4	118.5	0.57	116.3	0.56	120.6	0.58	155.1	0.74
	1999	130.7	0.46	87.1	114.5	0.41	127.0	0.45	117.0	0.42	147.9	0.52
	2000	149.4	0.41	84.1	125.8	0.34	131.9	0.36	134.1	0.37	176.3	0.48

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 4b. Salary trends by type of education institution

(in MD lei)

Average salary, monthly estimates, contributions excluded	Year	Polyvalent schools		Vocational schools		Colleges		Universities	
		Salary	Salary/ GDP *per capita*	Salary	Salary/ GDP per capita	Salary	Salary/ GDP *per capita*	Salary	Salary/ GDP *per capita*
Teachers	1997	236.10	1.16	240.30	1.18	237.20	1.17	291.30	1.43
	1998	245.70	1.18	285.60	1.37	218.30	1.05	277.10	1.33
	1999	238.40	0.85	303.40	1.08	209.40	0.74	255.60	0.91
	2000	266.80	0.73	420.90	1.15	257.30	0.70	282.40	0.77
Other staff	1997	116.80	0.57	124.40	0.61	111.60	0.55	111.50	0.55
	1998	116.00	0.56	125.00	0.60	111.50	0.54	111.20	0.53
	1999	118.30	0.42	130.00	0.46	106.90	0.38	98.80	0.35
	2000	145.20	0.40	145.80	0.40	121.60	0.33	121.80	0.33

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 5. Budgeted allocations by level of education and type of education institution

(in percentages)

Level of education/ Type of institution	1997	1998	1999	2000
Preschool	20.7	18.6	17.0	15.8
Primary	1.3	1.2	1.4	1.6
Secondary general	41.6	41.4	43.5	48.4
Secondary boarding	2.6	2.4	3.9	3.6
Boarding handicapped	2.2	2.0	2.9	2.9
Polyvalent vocational schools	6.2	5.8	6.1	4.4
Professional schools	0.2	1.0	1.3	1.0
Colleges[1]	5.4	4.7	4.4	3.6
Universities[1]	8.2	8.8	7.3	6.4
Extra-curricular institutions	2.9	3.5	3.7	4.2
Others	8.3	10.0	7.3	6.5
Central administration	0.4	0.7	1.2	1.5
Total	100.0	100.0	100.0	100.0

[1] Budgeted allocations for these institutions do not include resources allocated for tertiary institutions attached to ministries other than the Ministry of Education.

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 6. Total resource allocations by level of education and type of institution

(in percentages)

Level of education Type of institution	1997	1998	1999	2000
Preschool	19.7	16.8	14.4	13.4
Primary	1.2	1.1	1.2	1.4
Secondary general	39.5	37.5	37.2	41.2
Secondary boarding	2.5	2.2	3.4	3.1
Boarding handicapped	2.1	1.8	2.6	2.5
Polyvalent vocational schools	6.3	5.7	5.8	4.4
Professional schools	0.2	1.0	1.3	1.0
Colleges	6.0	5.5	5.9	5.2
Universities	11.2	15.4	17.8	17.1
Extra-curricular institutions	2.8	3.2	3.2	3.6
Other	8.0	9.2	6.2	5.9
Central administration	0.4	0.6	1.0	1.3
Total	100.0	100.0	100.0	100.0

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 7. Total public expenditure by item of expenditure

(in millions of MD lei)

Item of expenditure	1997	1998	1999	2000
Teacher salaries	185.7	176.3	168.5	227.1
NTS salaries	190.4	165.8	140.8	162.5
Heating	181.0	80.5	67.3	48.6
Electricity	39.3	30.2	29.1	33.0
Water	51.5	38.8	22.0	33.2
Food	77.3	62.7	53.5	55.3
Scholarships	26.4	25.1	25.0	21.6
Textbooks, teaching materials, and staff training	8.3	2.8	3.6	2.5
Repair works	36.7	25.7	22.5	39.4
Equipment	9.6	13.4	3.8	5.9
Other	82.6	19.9	39.8	89.4
Total	888.8	641.2	575.9	718.5

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 8. Structure of the total public expenditure by item of expenditure

(in percentages)

Expenditure item	1997	1998	1999	2000
Teacher salaries	20.9	27.5	29.3	31.6
NTS salaries	21.4	25.9	24.4	22.6
Heating	20.4	12.6	11.7	6.8
Electricity	4.4	4.7	5.1	4.6
Water	5.8	6.1	3.8	4.6
Food	8.7	9.8	9.3	7.7
Scholarships	3.0	3.9	4.3	3.0
Textbooks, teaching materials, and staff training	0.9	0.4	0.6	0.3
Repair works	4.1	4.0	3.9	5.5
Equipment	1.1	2.1	0.7	0.8
Other	9.3	3.1	6.9	12.4
Total	100.0	100.0	100.0	100.0

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 9. Per-pupil budget expenditure by level of education and type of education institution

(in MD lei)

Level of education Type of institution	1997	1998	1999	2000
Preschool	1,590	1,096	1,060	1,357
Primary	657	426	439	624
Secondary general	595	430	412	581
Secondary boarding	3,572	2,345	3,396	3,892
Boarding handicapped	3,529	2,337	3,163	3,907
Polyvalent vocational schools	1,903	1,543	1,871	2,150
Professional schools	1,502	1,260	1,841	2,008
Colleges	1,982	1,388	1,284	1,582
Universities	1,944	1,510	1,213	1,510
Extra-curricular institutions	19,720	2,426	2,417	5,054
Total	1,025	744	697	906

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 10. Per pupil expenditure (total) by level of education and type of institution

(in MD lei)

Level of education/Type of institution	1997	1998	1999	2000
Preschool	1,590	1,096	1,060	1,357
Primary	657	426	439	624
Secondary general	595	431	416	581
Secondary boarding	3601	2,378	3,472	3,961
Boarding handicapped	3,568	2,361	3,234	3,968
Polyvalent schools	2,057	1,671	2,126	2,495
Professional schools	1,567	1,422	2,147	2,372
Colleges	2,320	1,782	2,051	2,684
Universities	2,798	2,930	3,505	4,722
Extra-curricular institutions	19,948	2,488	2,471	5,102
Total	1,079	822	823	1,067

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 11. Demographic trends: 1999-2014

(in thousands)

Age Group	1999	2004	2009	2014
1-6 year olds (preschool)	285.4	242.3	258.5	256.7
7-10 years olds (G 1-4)	247.7	185.0	156.9	170.0
11-15 year olds (G 5-9)	364.9	298.9	223.5	194.9
16-18 year olds (G 10-12)	204.2	216.0	167.8	125.0
19-23 year olds (higher education)	307.2	339.8	334.8	257.1

Source: Population Projections.

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 12. Teaching and non-teaching staff distribution by level of education and type of institution

(in whole numbers)

Level of education Type of institution	1997 Teaching staff	1997 Non-teaching staff	1998 Teaching staff	1998 Non-teaching staff	1999 Teaching staff	1999 Non-teaching staff
Preschool	-	32,839	-	31,492	-	25,472
Primary	936	798	1,036	875	1,195	898
Secondary general	40,360	31,835	42,558	31,175	42,487	28,279
Secondary boarding	529	1,789	499	1,846	559	1,713
Boarding handicapped	770	2,339	775	2,219	956	1,908
Polyvalent vocational	1,192	5,668	994	4,823	907	4,327
Professional	37	238	141	1,023	116	941
Colleges	2,898	4,337	2,820	3,252	2,513	2,832
Universities	3,994	6,603	4,284	6,693	4,154	4,261
Total (and other institutions)	55,784	92,679	58,374	90,651	57,965	76,570

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

Table 13. Ratio of students to non-teaching staff

(in percentages)

Level of education Type of institution	1997	1998	1999
Preschool	3.5	3.5	3.6
Primary	22.2	20.7	20.9
Secondary general	19.5	19.8	21.5
Secondary boarding	3.7	3.5	3.8
Boarding handicapped	2.4	2.4	2.8
Polyvalent vocational	5.1	5.0	5.5
Professional	5.4	5.1	9.1
Colleges	8.0	8.3	8.9
Universities	7.4	8.1	12.8
Total (incl. others)	9.5	9.7	11.2

Source: Preschool and Basic Education: Status, Issues, and Options for a National Plan of Action (Main Document), National Consultation on "Education for All" (Chişinău, 3-5 December 2001).

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